OIPE
MAR 0 9 2005
PATENT & TRADEMARK OFFICE
JC182

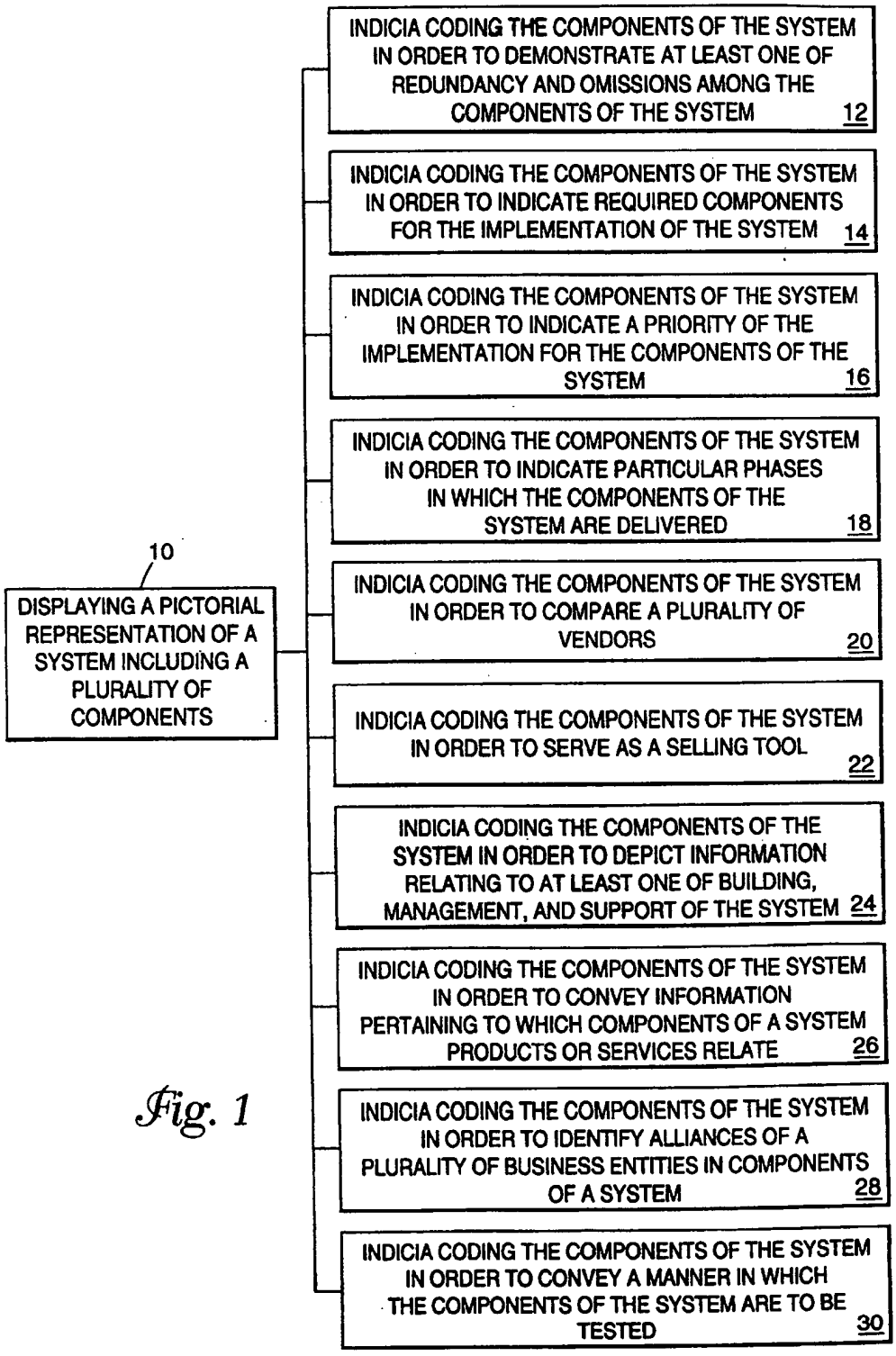

Fig. 1

OIPE
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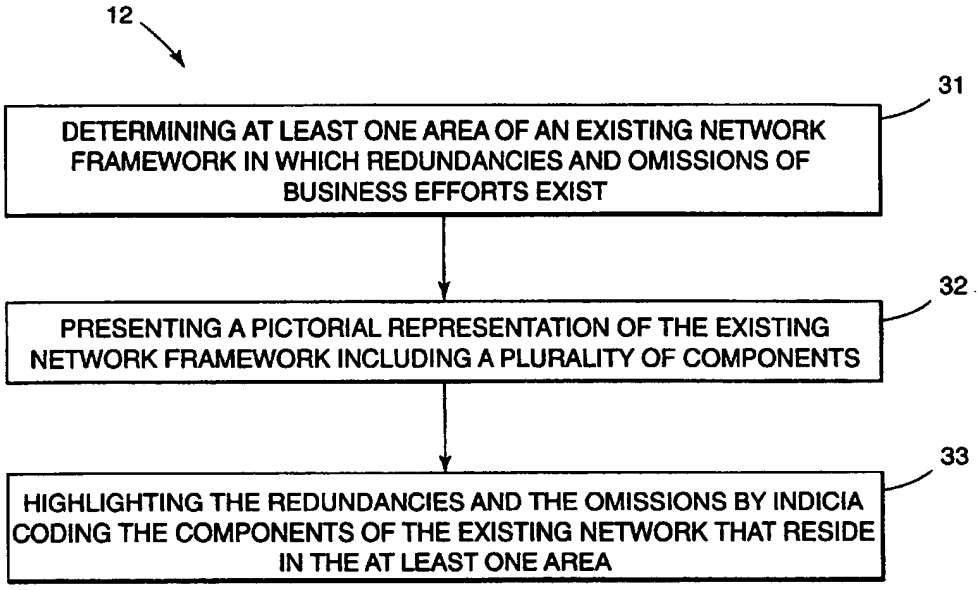

Fig. 2

OIPE JC18
MAR 0 9 2005
PATENT & TRADEMARK OFFICE

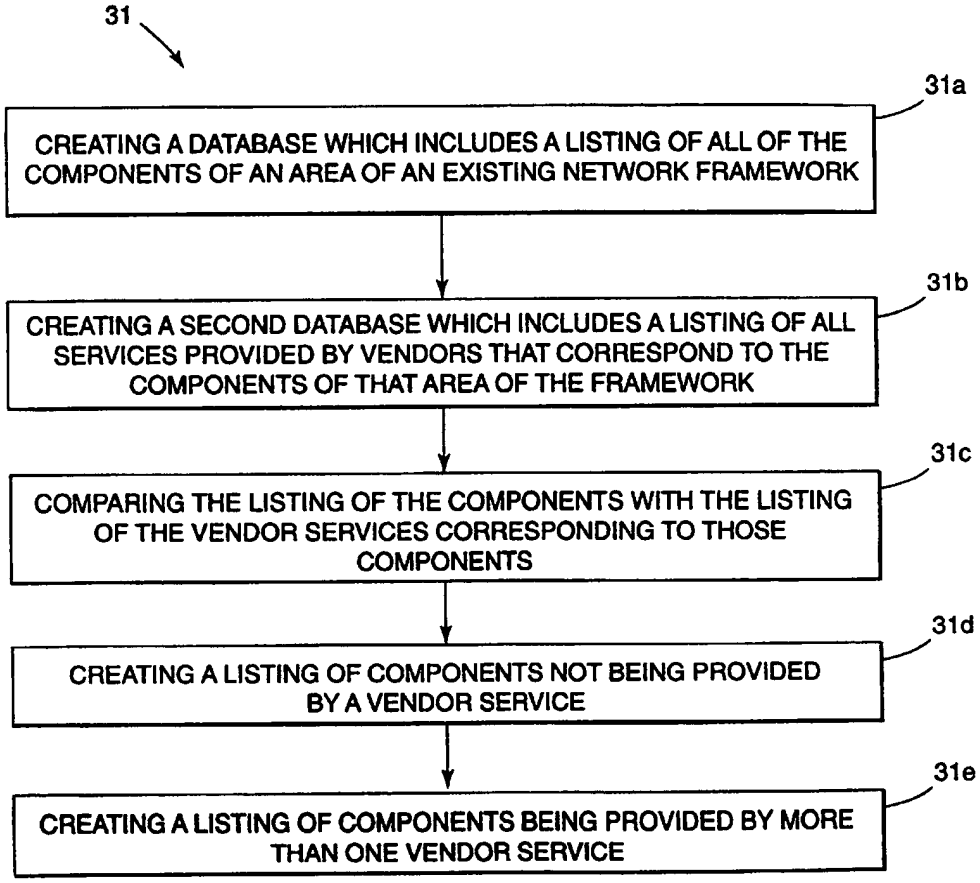

Fig. 3

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PATENT & TRADEMARK OFFICE
JC12

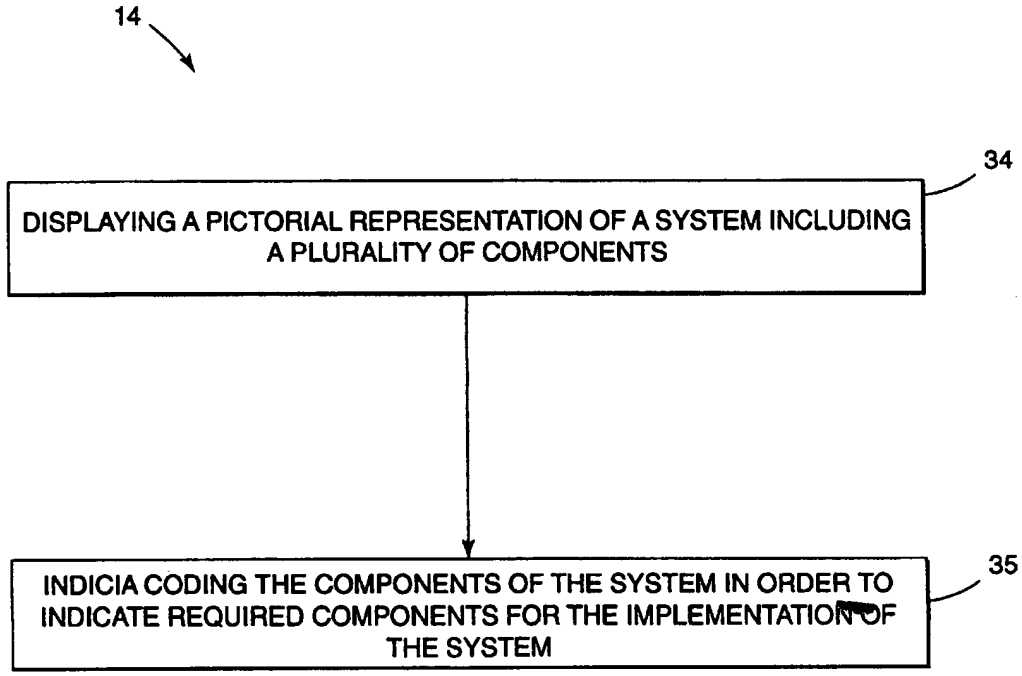
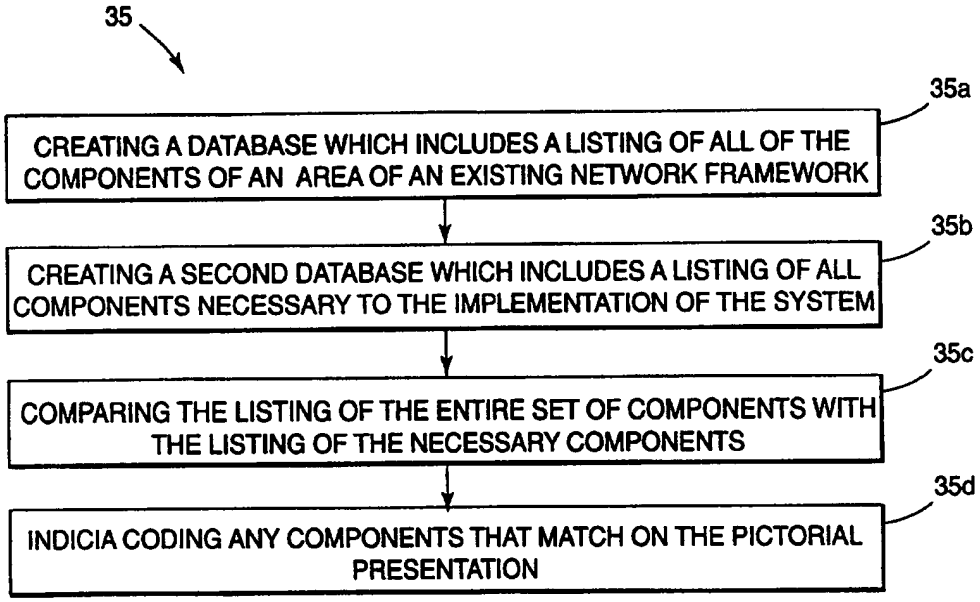


Fig. 4


35
35a
CREATING A DATABASE WHICH INCLUDES A LISTING OF ALL OF THE COMPONENTS OF AN AREA OF AN EXISTING NETWORK FRAMEWORK
35b
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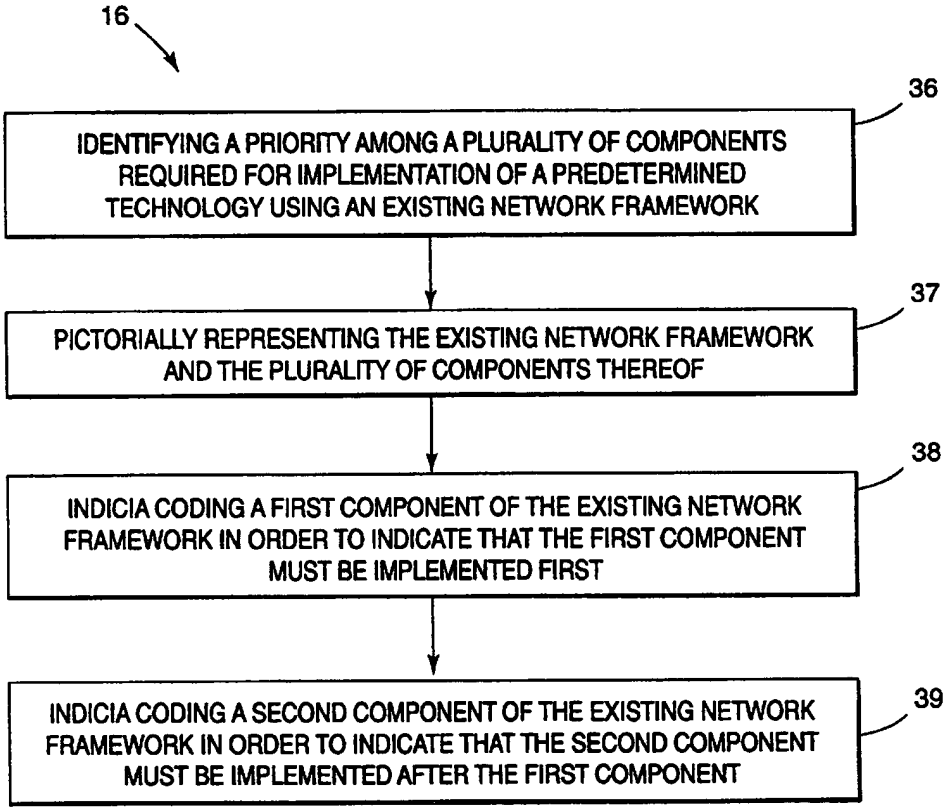
35c
COMPARING THE LISTING OF THE ENTIRE SET OF COMPONENTS WITH THE LISTING OF THE NECESSARY COMPONENTS
35d
INDICIA CODING ANY COMPONENTS THAT MATCH ON THE PICTORIAL PRESENTATION

Fig. 5


16
36
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37
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38
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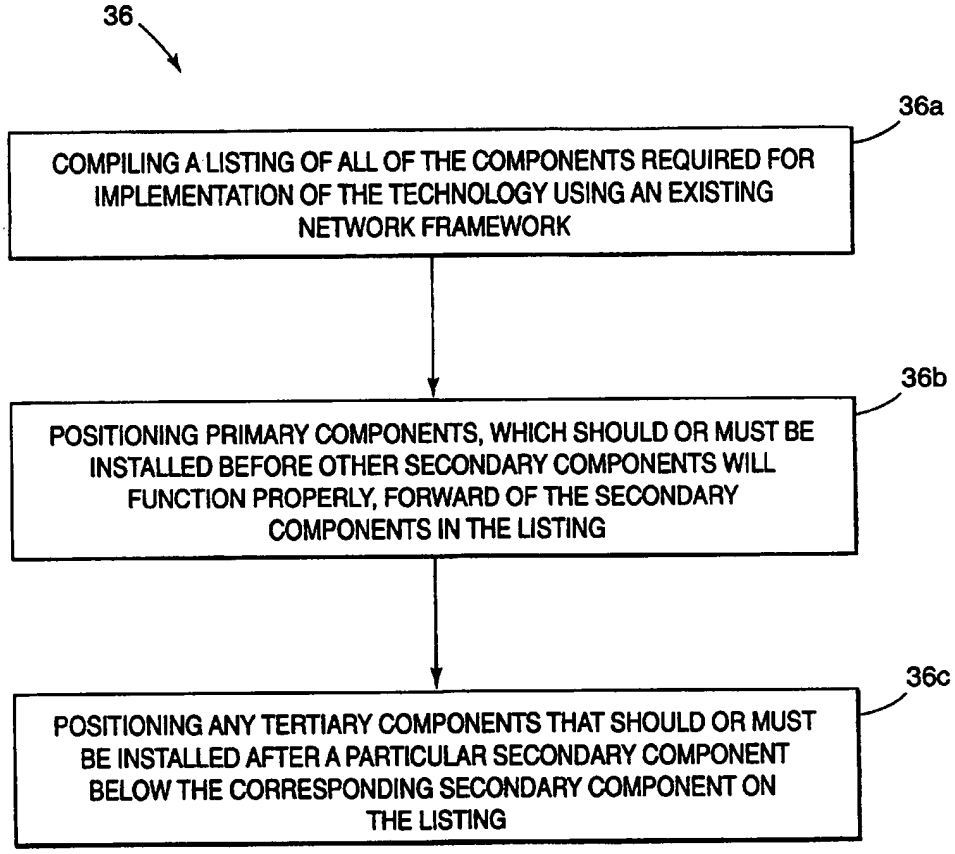
39
INDICIA CODING A SECOND COMPONENT OF THE EXISTING NETWORK FRAMEWORK IN ORDER TO INDICATE THAT THE SECOND COMPONENT MUST BE IMPLEMENTED AFTER THE FIRST COMPONENT

Fig. 6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36a
COMPILING A LISTING OF ALL OF THE COMPONENTS REQUIRED FOR IMPLEMENTATION OF THE TECHNOLOGY USING AN EXISTING NETWORK FRAMEWORK
36b
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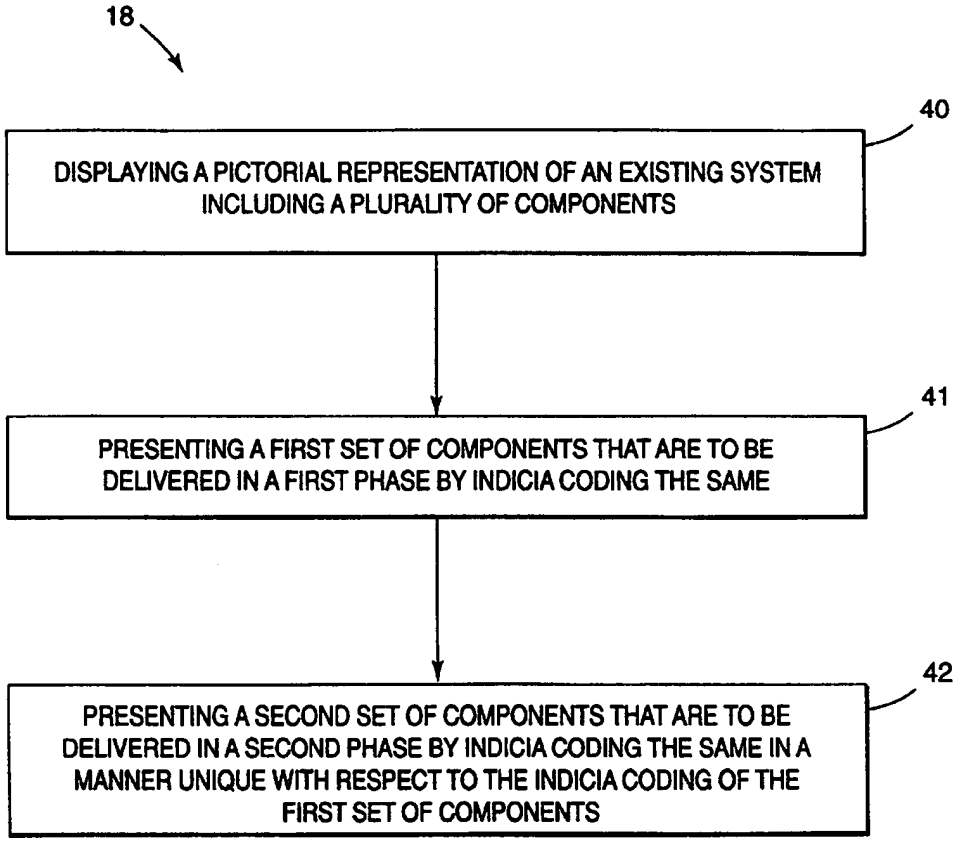
36c
POSITIONING ANY TERTIARY COMPONENTS THAT SHOULD OR MUST BE INSTALLED AFTER A PARTICULAR SECONDARY COMPONENT BELOW THE CORRESPONDING SECONDARY COMPONENT ON THE LISTING

Fig. 7


18
40
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41
PRESENTING A FIRST SET OF COMPONENTS THAT ARE TO BE DELIVERED IN A FIRST PHASE BY INDICIA CODING THE SAME
42
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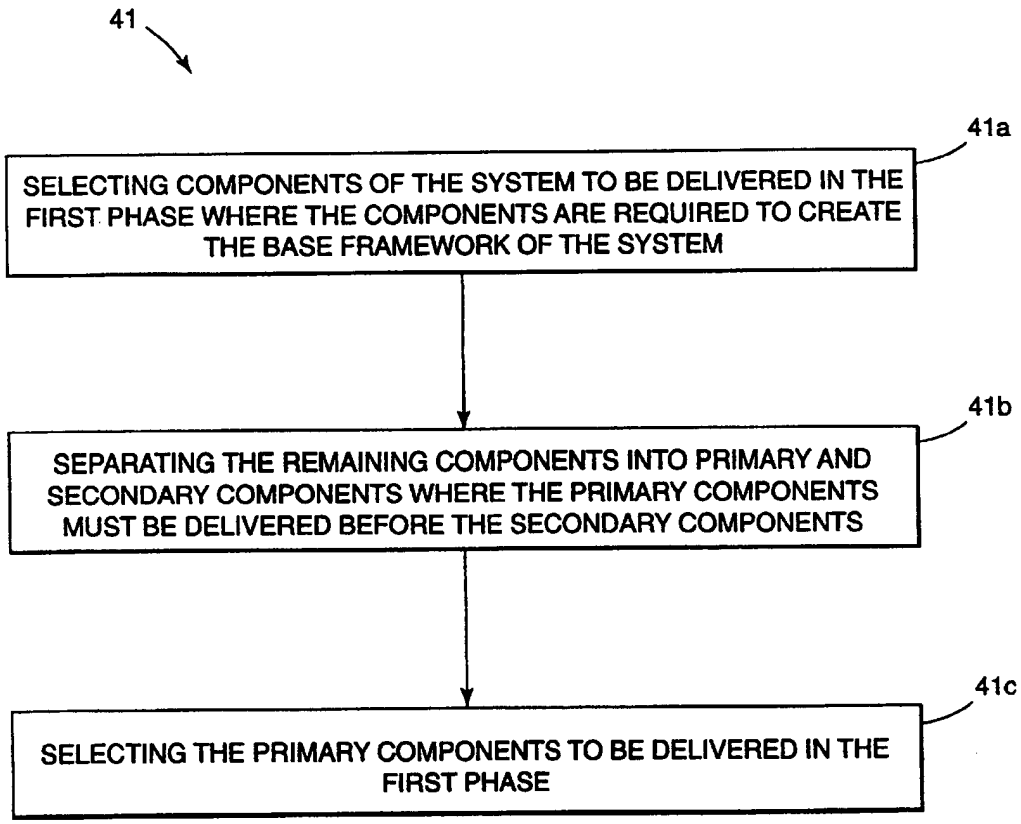
Fig. 8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41a
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41b
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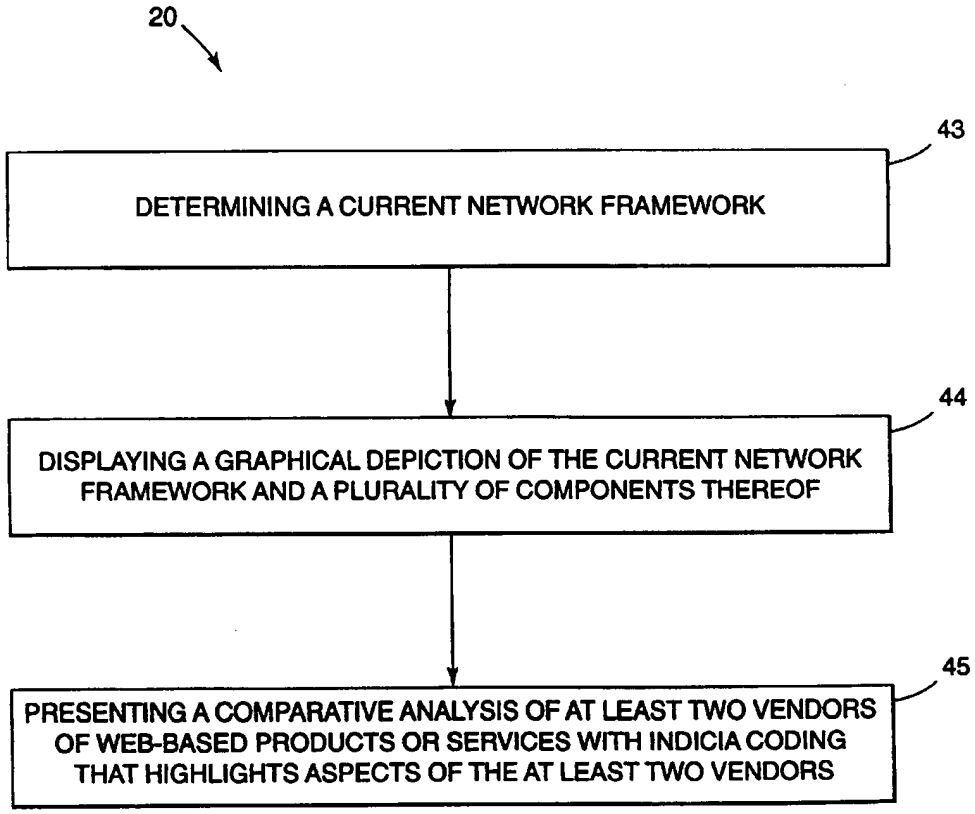
41c
SELECTING THE PRIMARY COMPONENTS TO BE DELIVERED IN THE FIRST PHASE

Fig. 9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43
DETERMINING A CURRENT NETWORK FRAMEWORK
44
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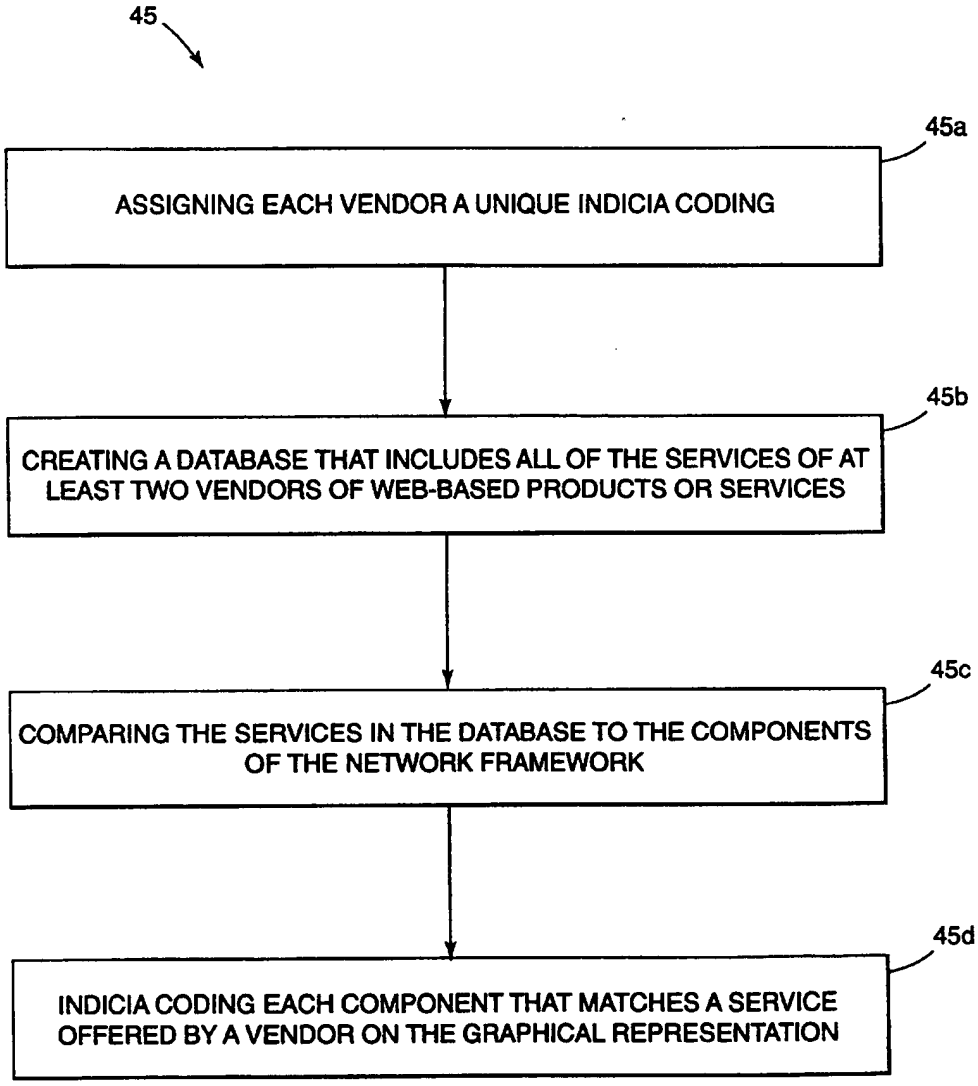
45
PRESENTING A COMPARATIVE ANALYSIS OF AT LEAST TWO VENDORS OF WEB-BASED PRODUCTS OR SERVICES WITH INDICIA CODING THAT HIGHLIGHTS ASPECTS OF THE AT LEAST TWO VENDORS

Fig. 10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45a
ASSIGNING EACH VENDOR A UNIQUE INDICIA CODING
45b
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45c
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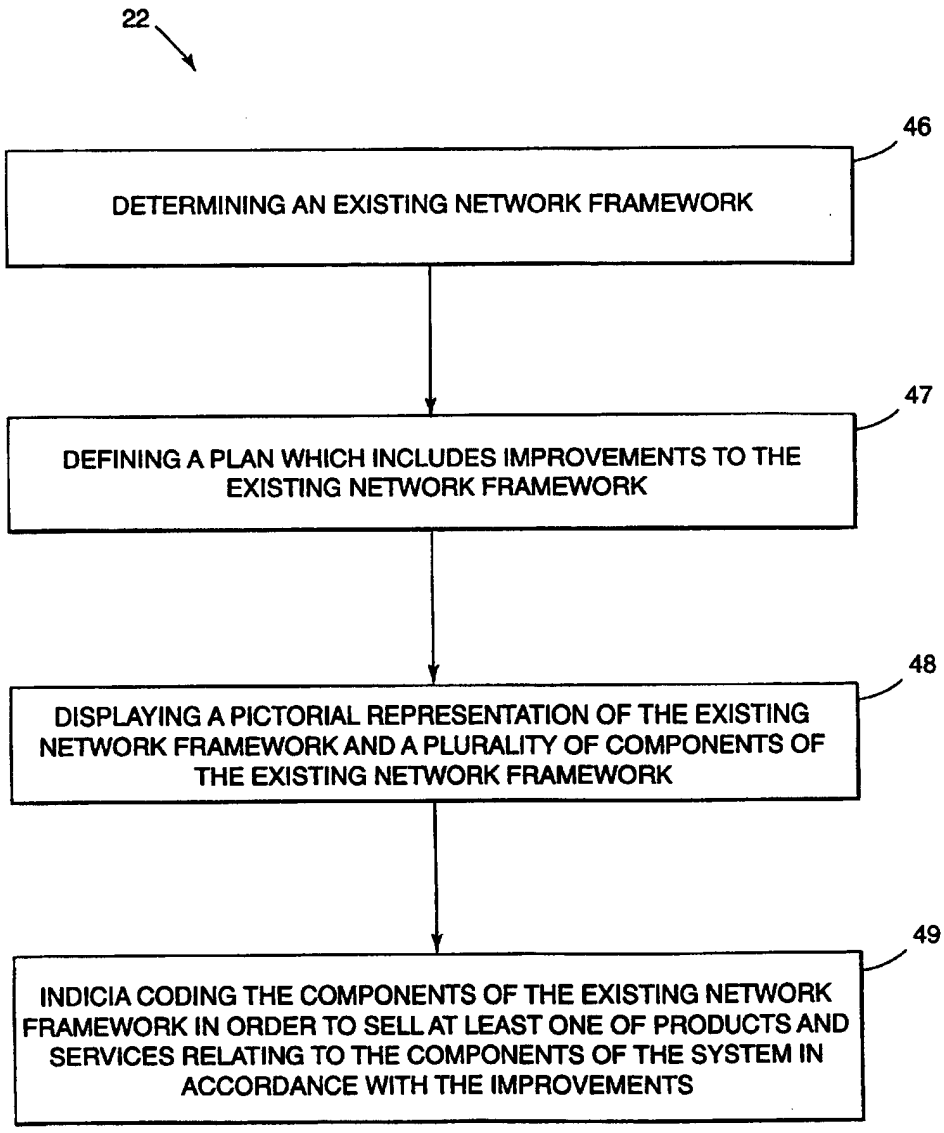
45d
INDICIA CODING EACH COMPONENT THAT MATCHES A SERVICE OFFERED BY A VENDOR ON THE GRAPHICAL REPRESENTATION

Fig. 11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46
DETERMINING AN EXISTING NETWORK FRAMEWORK
47
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48
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49
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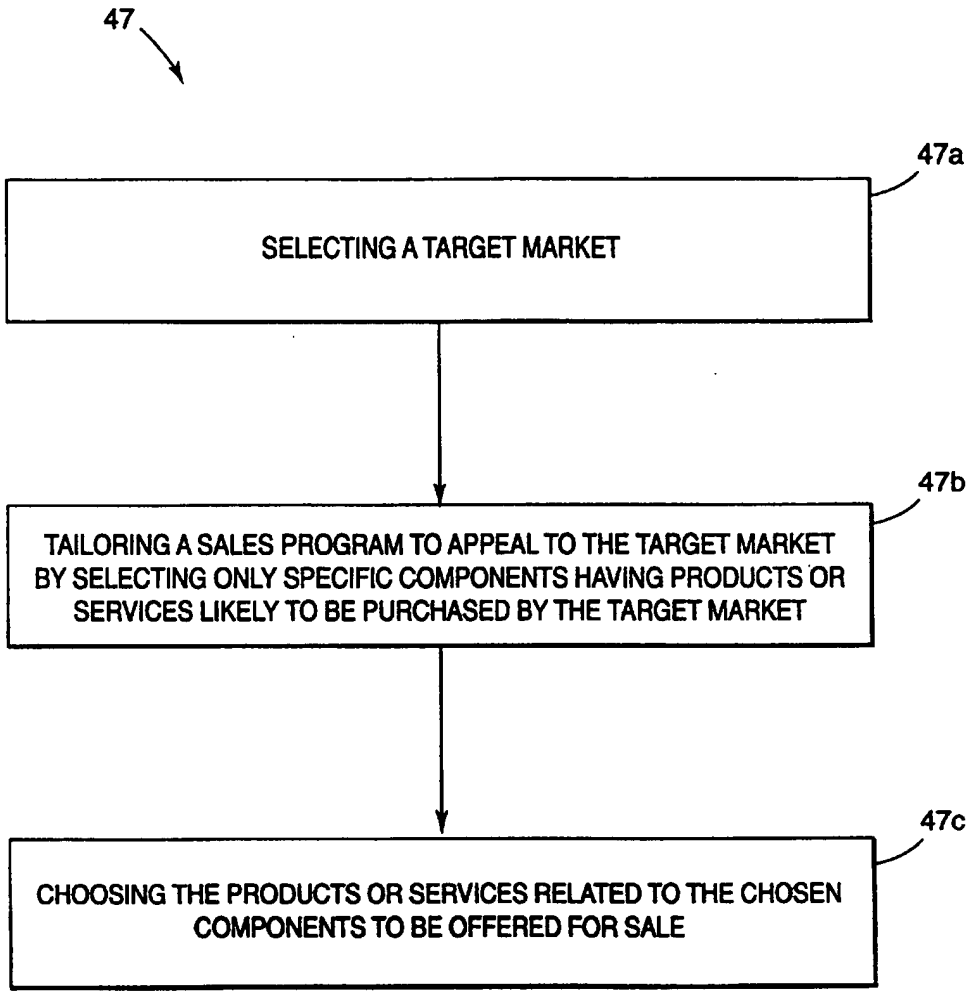
Fig. 12


47
47a
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47b
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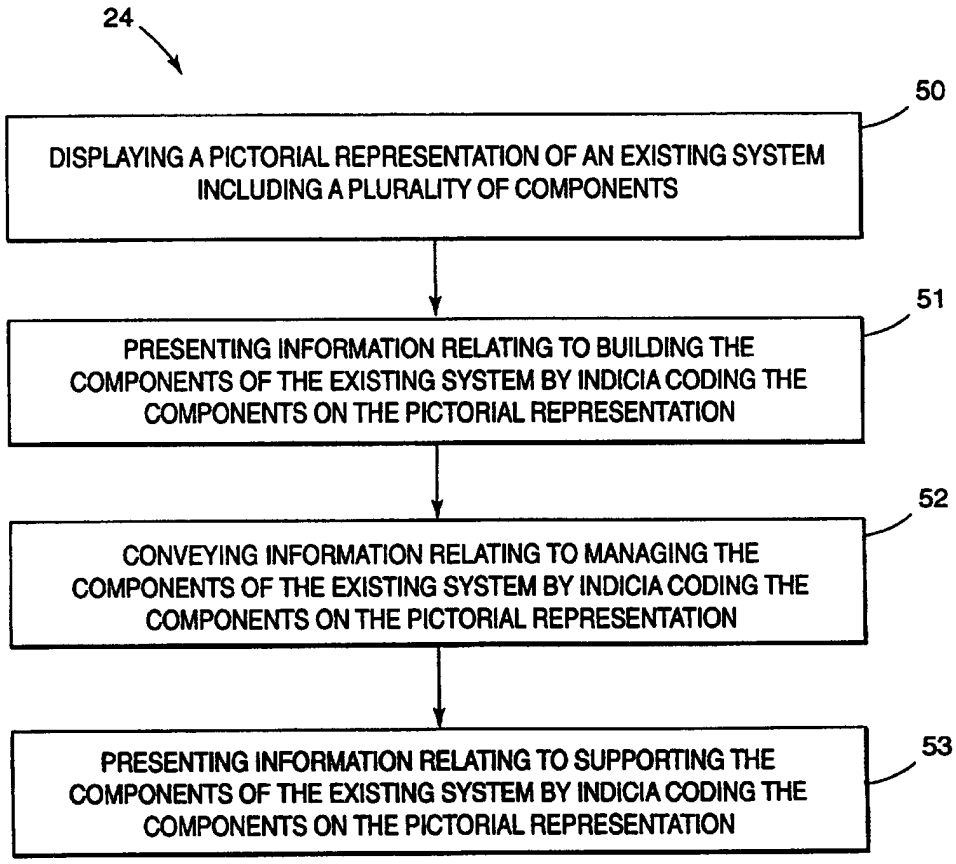
47c
CHOOSING THE PRODUCTS OR SERVICES RELATED TO THE CHOSEN COMPONENTS TO BE OFFERED FOR SALE

Fig. 13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50
DISPLAYING A PICTORIAL REPRESENTATION OF AN EXISTING SYSTEM INCLUDING A PLURALITY OF COMPONENTS
51
PRESENTING INFORMATION RELATING TO BUILDING THE COMPONENTS OF THE EXISTING SYSTEM BY INDICIA CODING THE COMPONENTS ON THE PICTORIAL REPRESENTATION
52
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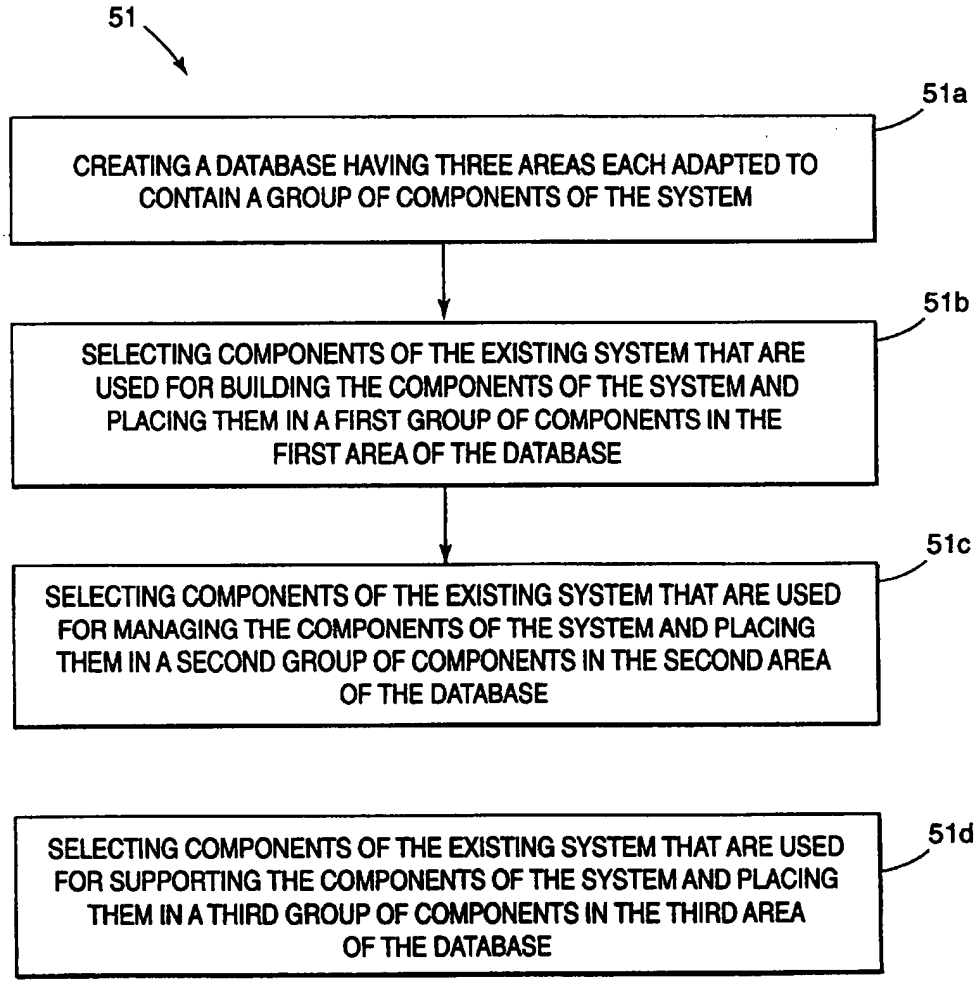
53
PRESENTING INFORMATION RELATING TO SUPPORTING THE COMPONENTS OF THE EXISTING SYSTEM BY INDICIA CODING THE COMPONENTS ON THE PICTORIAL REPRESENTATION

Fig. 14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51a
CREATING A DATABASE HAVING THREE AREAS EACH ADAPTED TO CONTAIN A GROUP OF COMPONENTS OF THE SYSTEM
51b
SELECTING COMPONENTS OF THE EXISTING SYSTEM THAT ARE USED FOR BUILDING THE COMPONENTS OF THE SYSTEM AND PLACING THEM IN A FIRST GROUP OF COMPONENTS IN THE FIRST AREA OF THE DATABASE
51c
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51d
SELECTING COMPONENTS OF THE EXISTING SYSTEM THAT ARE USED FOR SUPPORTING THE COMPONENTS OF THE SYSTEM AND PLACING THEM IN A THIRD GROUP OF COMPONENTS IN THE THIRD AREA OF THE DATABASE

Fig. 15

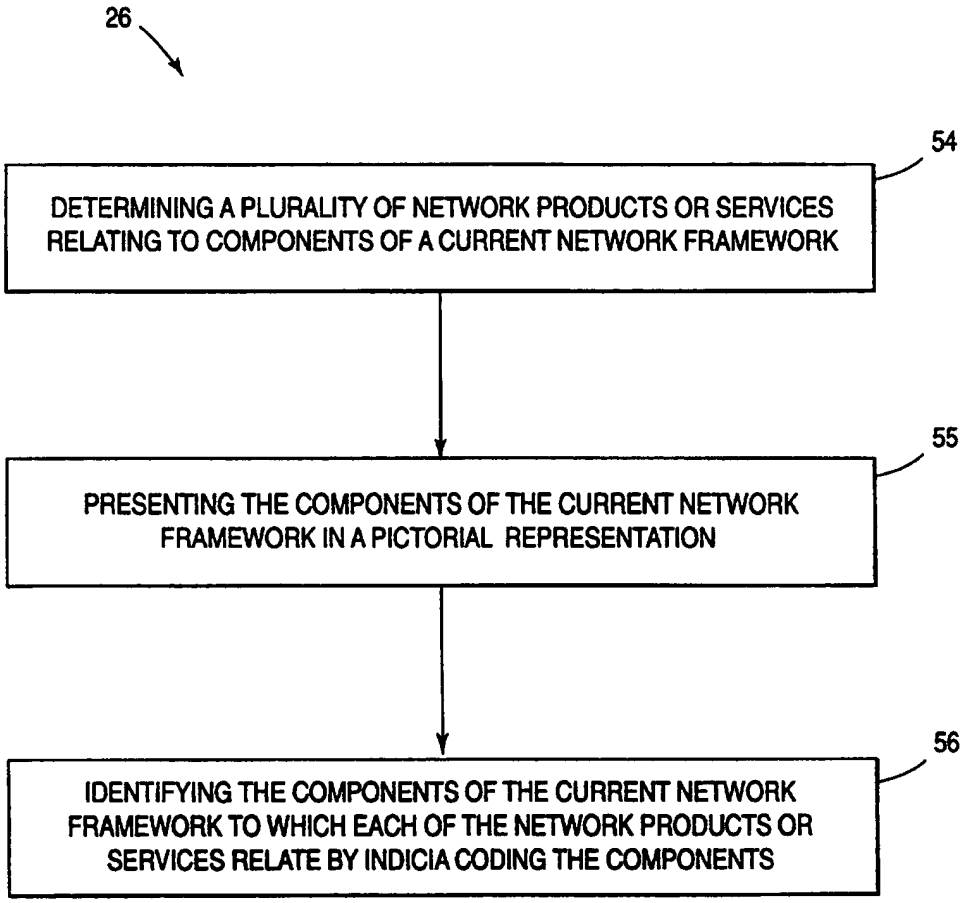
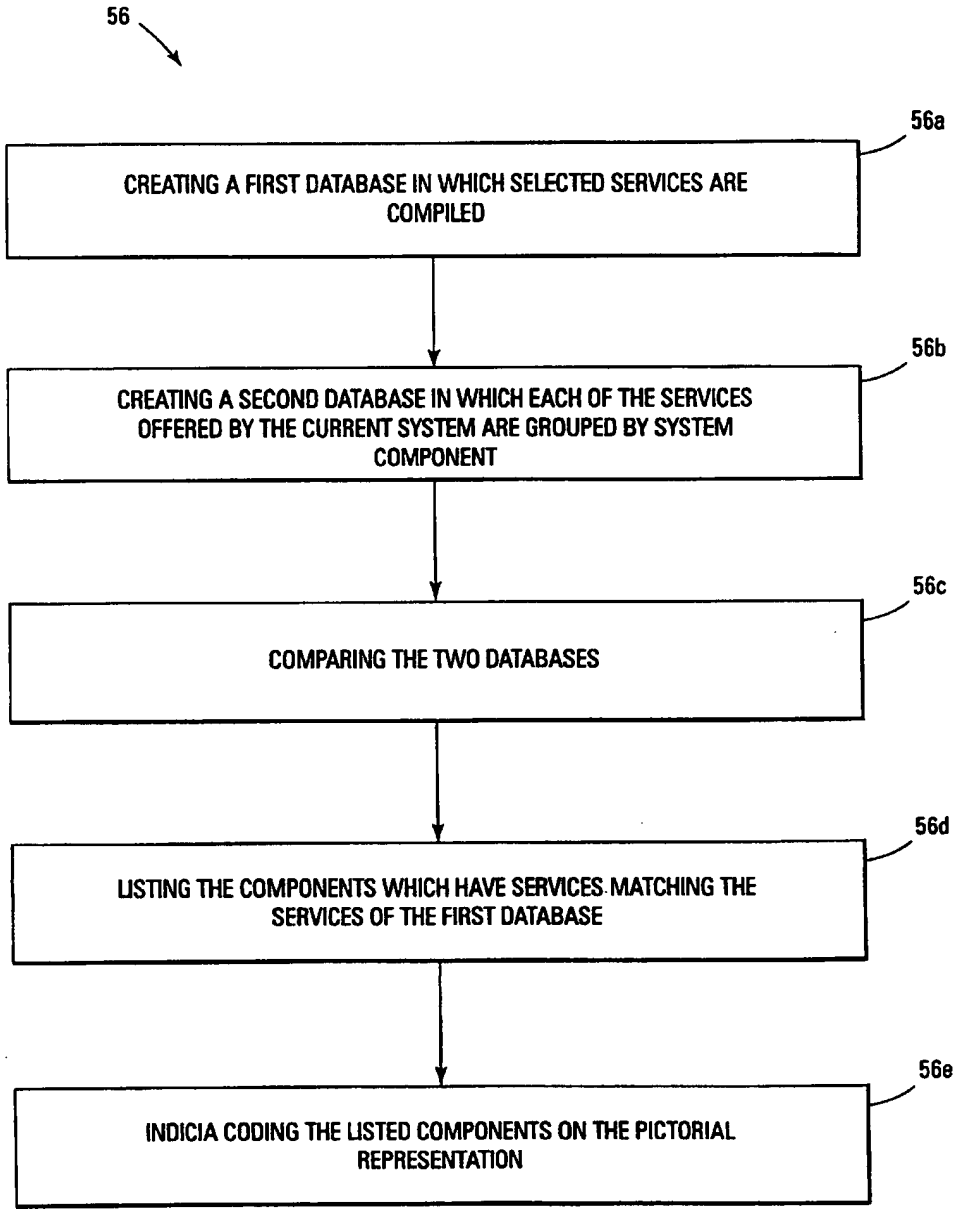

26
54
DETERMINING A PLURALITY OF NETWORK PRODUCTS OR SERVICES RELATING TO COMPONENTS OF A CURRENT NETWORK FRAMEWORK
55
PRESENTING THE COMPONENTS OF THE CURRENT NETWORK FRAMEWORK IN A PICTORIAL REPRESENTATION
56
IDENTIFYING THE COMPONENTS OF THE CURRENT NETWORK FRAMEWORK TO WHICH EACH OF THE NETWORK PRODUCTS OR SERVICES RELATE BY INDICIA CODING THE COMPONENTS

Fig. 16


56
56a
CREATING A FIRST DATABASE IN WHICH SELECTED SERVICES ARE COMPILED
56b
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56c
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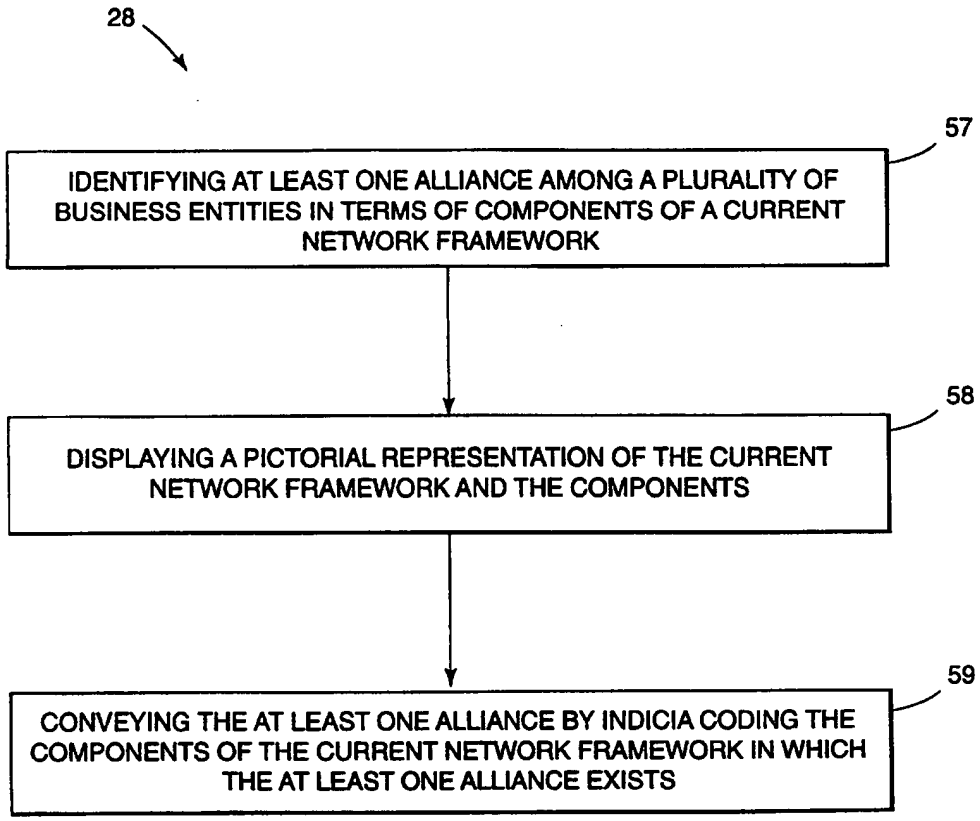
56d
LISTING THE COMPONENTS WHICH HAVE SERVICES MATCHING THE SERVICES OF THE FIRST DATABASE
56e
INDICIA CODING THE LISTED COMPONENTS ON THE PICTORIAL REPRESENTATION

Fig. 17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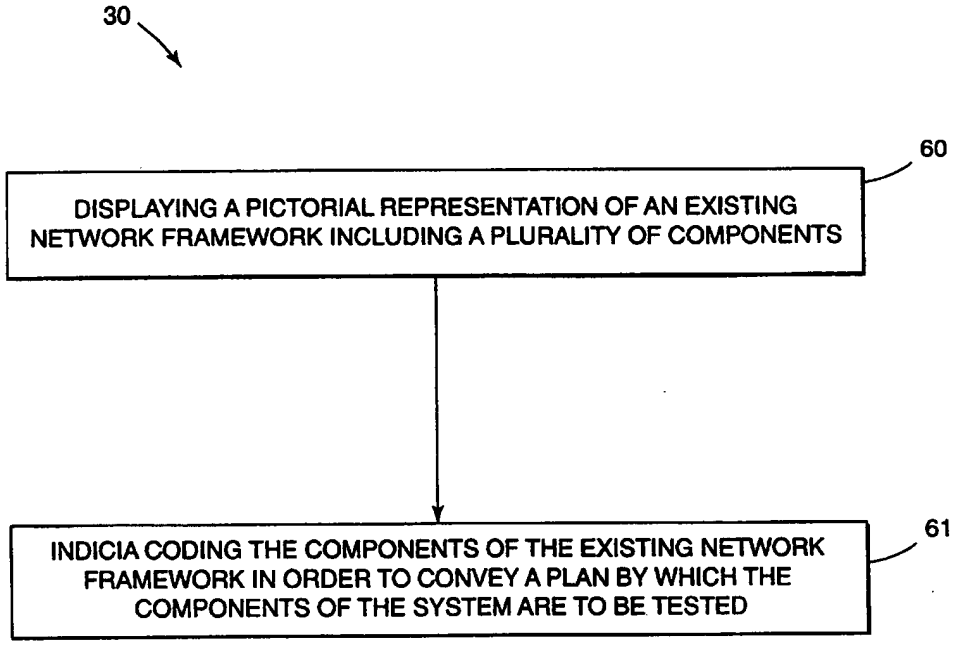
57
IDENTIFYING AT LEAST ONE ALLIANCE AMONG A PLURALITY OF BUSINESS ENTITIES IN TERMS OF COMPONENTS OF A CURRENT NETWORK FRAMEWORK
58
DISPLAYING A PICTORIAL REPRESENTATION OF THE CURRENT NETWORK FRAMEWORK AND THE COMPONENTS
59
CONVEYING THE AT LEAST ONE ALLIANCE BY INDICIA CODING THE COMPONENTS OF THE CURRENT NETWORK FRAMEWORK IN WHICH THE AT LEAST ONE ALLIANCE EXISTS

Fig. 18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60
DISPLAYING A PICTORIAL REPRESENTATION OF AN EXISTING NETWORK FRAMEWORK INCLUDING A PLURALITY OF COMPONENTS
61
INDICIA CODING THE COMPONENTS OF THE EXISTING NETWORK FRAMEWORK IN ORDER TO CONVEY A PLAN BY WHICH THE COMPONENTS OF THE SYSTEM ARE TO BE TESTED

Fig. 19

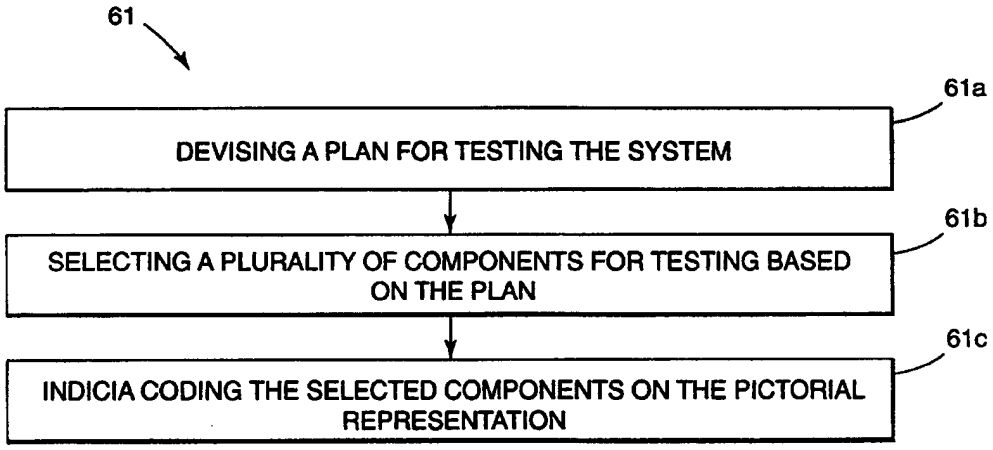

61
61a
DEVISING A PLAN FOR TESTING THE SYSTEM
61b
SELECTING A PLURALITY OF COMPONENTS FOR TESTING BASED ON THE PLAN
61c
INDICIA CODING THE SELECTED COMPONENTS ON THE PICTORIAL REPRESENTATION

Fig. 20

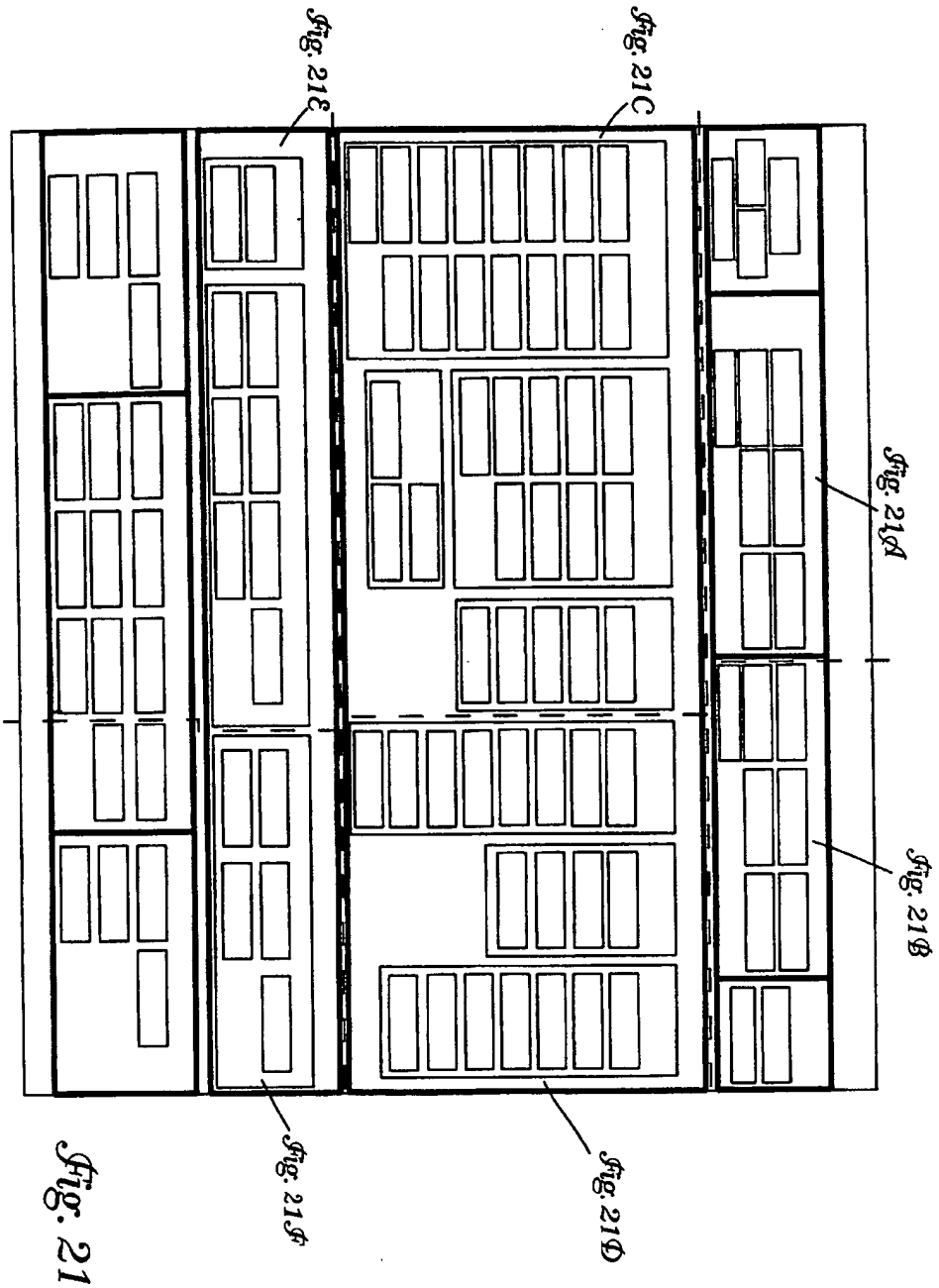


Fig. 21

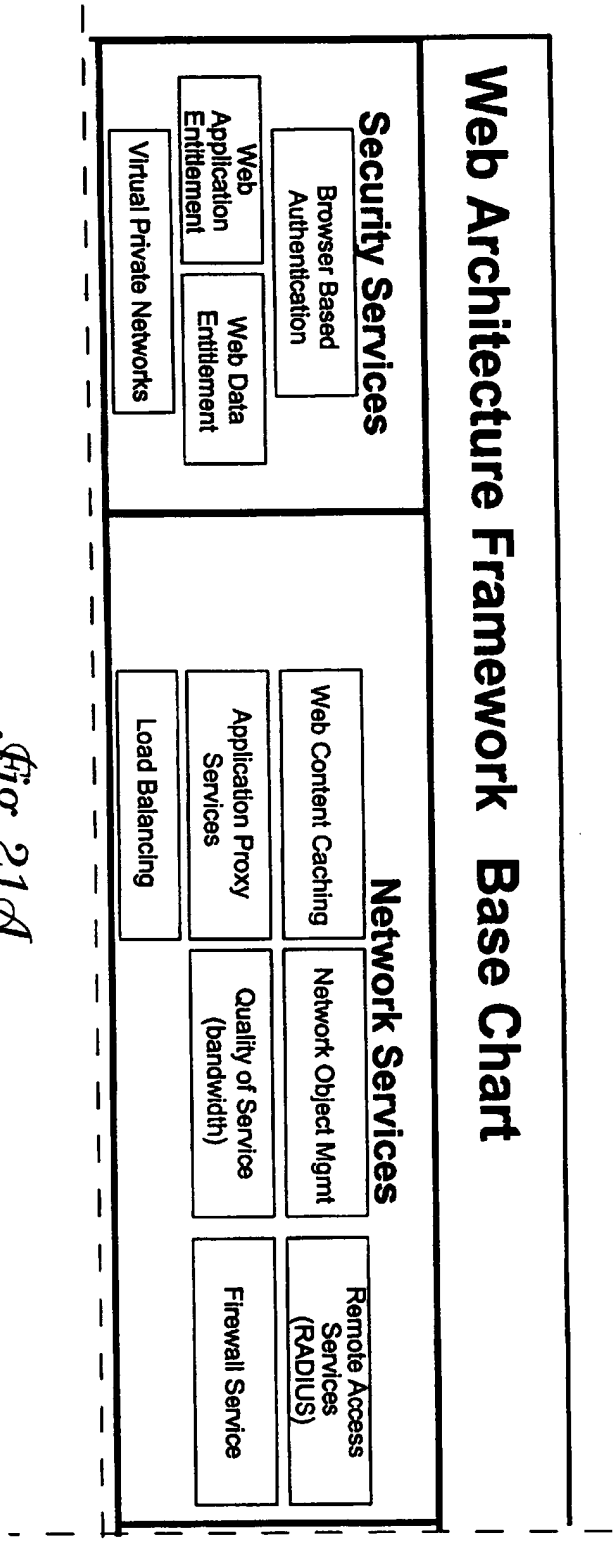

Web Architecture Framework Base Chart
Security Services
Browser Based Authentication
Web Application Entitlement
Web Data Entitlement
Virtual Private Networks
Network Services
Web Content Caching
Application Proxy Services
Load Balancing
Network Object Mgmt
Quality of Service (bandwidth)
Remote Access Services (RADIUS)
Firewall Service

Fig. 21A

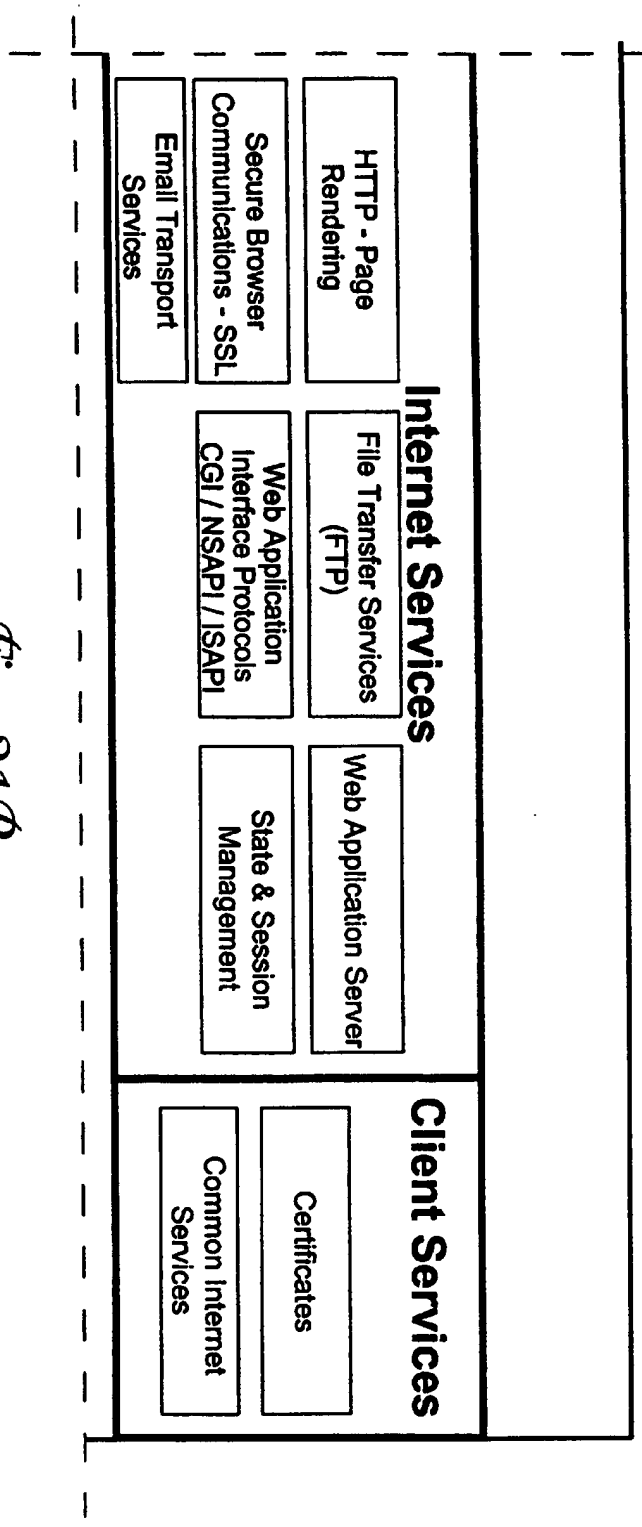

Internet Services
HTTP - Page Rendering
Secure Browser Communications - SSL
Email Transport Services
File Transfer Services (FTP)
Web Application Interface Protocols CGI / NSAPI / ISAPI
Web Application Server
State & Session Management
Client Services
Certificates
Common Internet Services

Fig. 21B

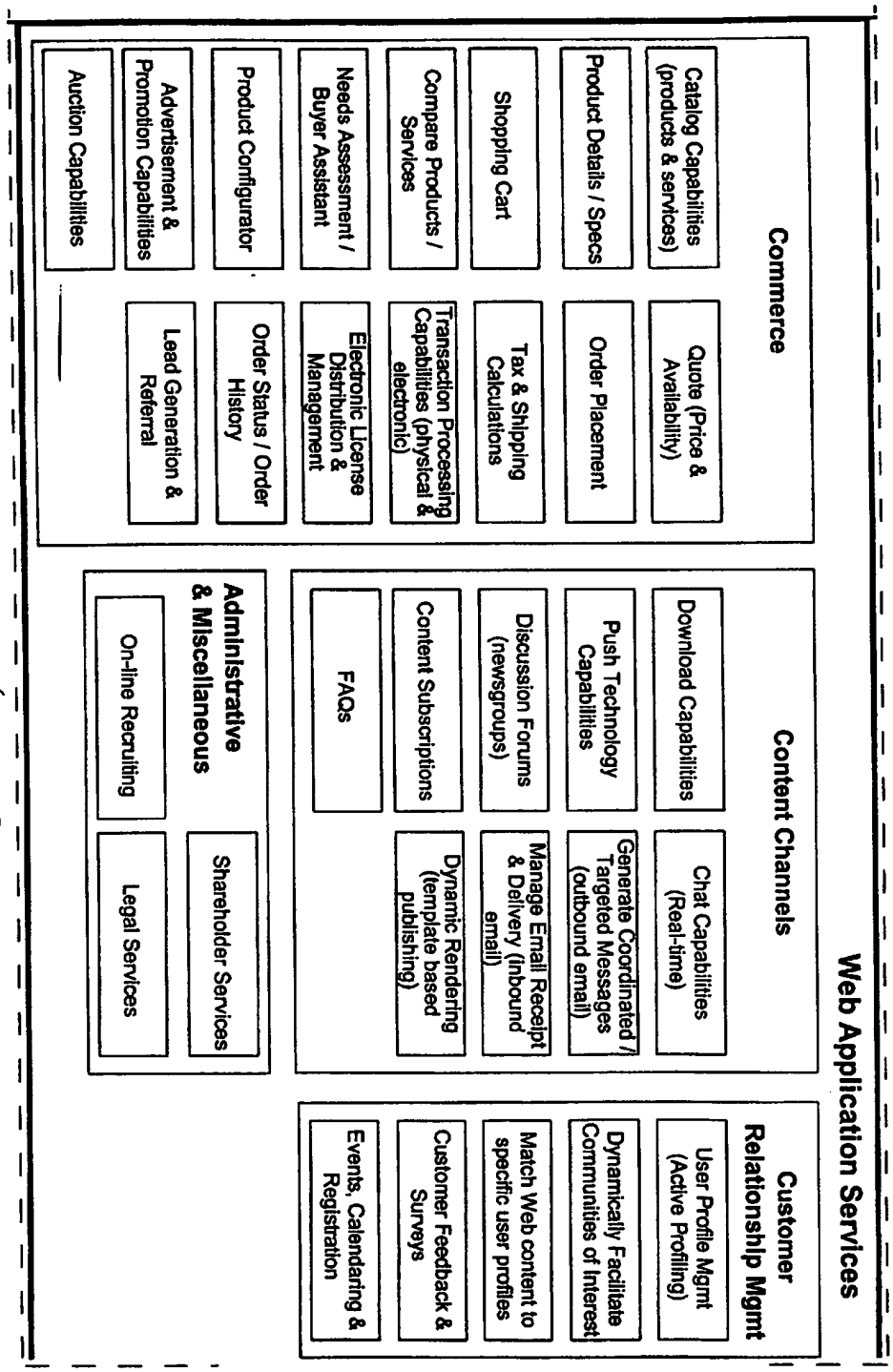

Web Application Services
Commerce
Catalog Capabilities (products & services)
Quote (Price & Availability)
Product Details / Specs
Order Placement
Shopping Cart
Tax & Shipping Calculations
Compare Products / Services
Transaction Processing Capabilities (physical & electronic)
Needs Assessment / Buyer Assistant
Electronic License Distribution & Management
Product Configurator
Order Status / Order History
Advertisement & Promotion Capabilities
Lead Generation & Referral
Auction Capabilities
Content Channels
Download Capabilities
Chat Capabilities (Real-time)
Push Technology Capabilities
Generate Coordinated / Targeted Messages (outbound email)
Discussion Forums (newsgroups)
Manage Email Receipt & Delivery (inbound email)
Content Subscriptions
Dynamic Rendering (template based publishing)
FAQs
Customer Relationship Mgmt
User Profile Mgmt (Active Profiling)
Dynamically Facilitate Communities of Interest
Match Web content to specific user profiles
Customer Feedback & Surveys
Events, Calendaring & Registration
Administrative & Miscellaneous
Shareholder Services
On-line Recruiting
Legal Services

Fig. 21C

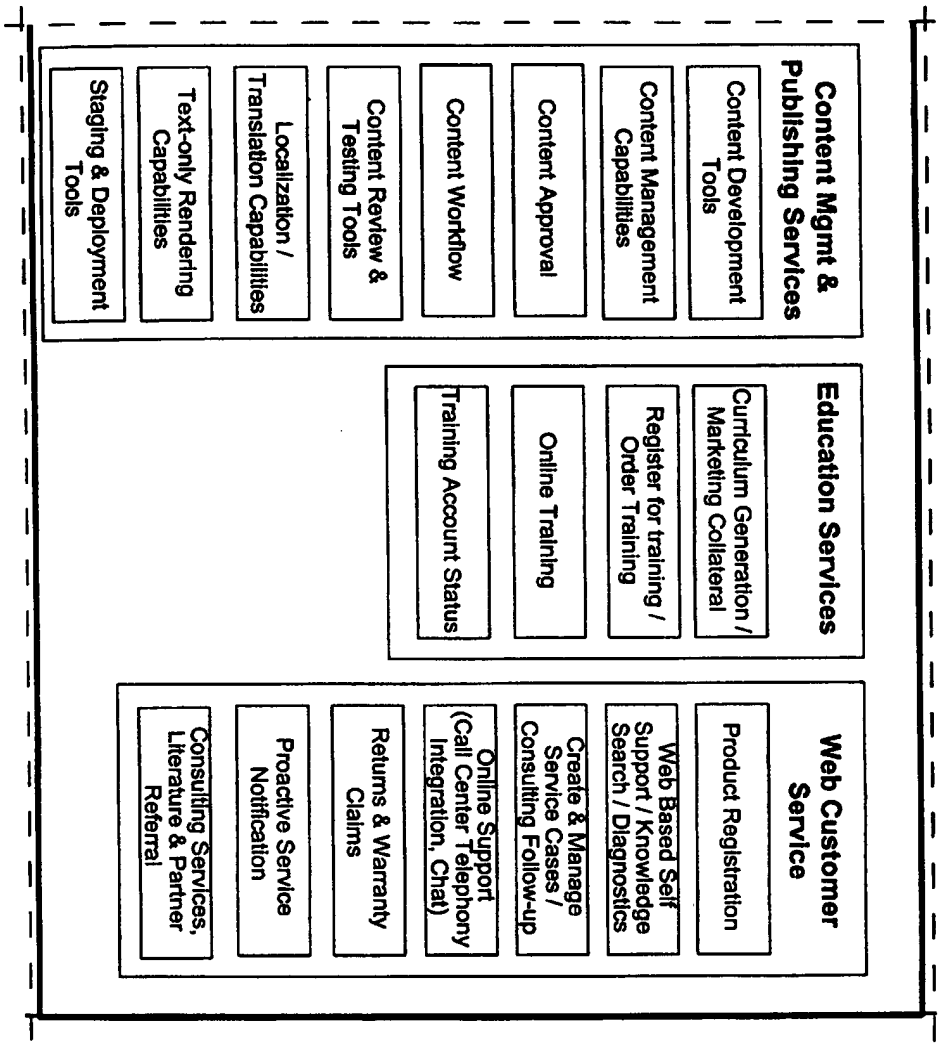

Content Mgmt & Publishing Services
Content Development Tools
Content Management Capabilities
Content Approval
Content Workflow
Content Review & Testing Tools
Localization / Translation Capabilities
Text-only Rendering Capabilities
Staging & Deployment Tools
Education Services
Curriculum Generation / Marketing Collateral
Register for training / Order Training
Online Training
Training Account Status
Web Customer Service
Product Registration
Web Based Self Support / Knowledge Search / Diagnostics
Create & Manage Service Cases / Consulting Follow-up
Online Support (Call Center Telephony Integration, Chat)
Returns & Warranty Claims
Proactive Service Notification
Consulting Services, Literature & Partner Referral

Fig. 21D

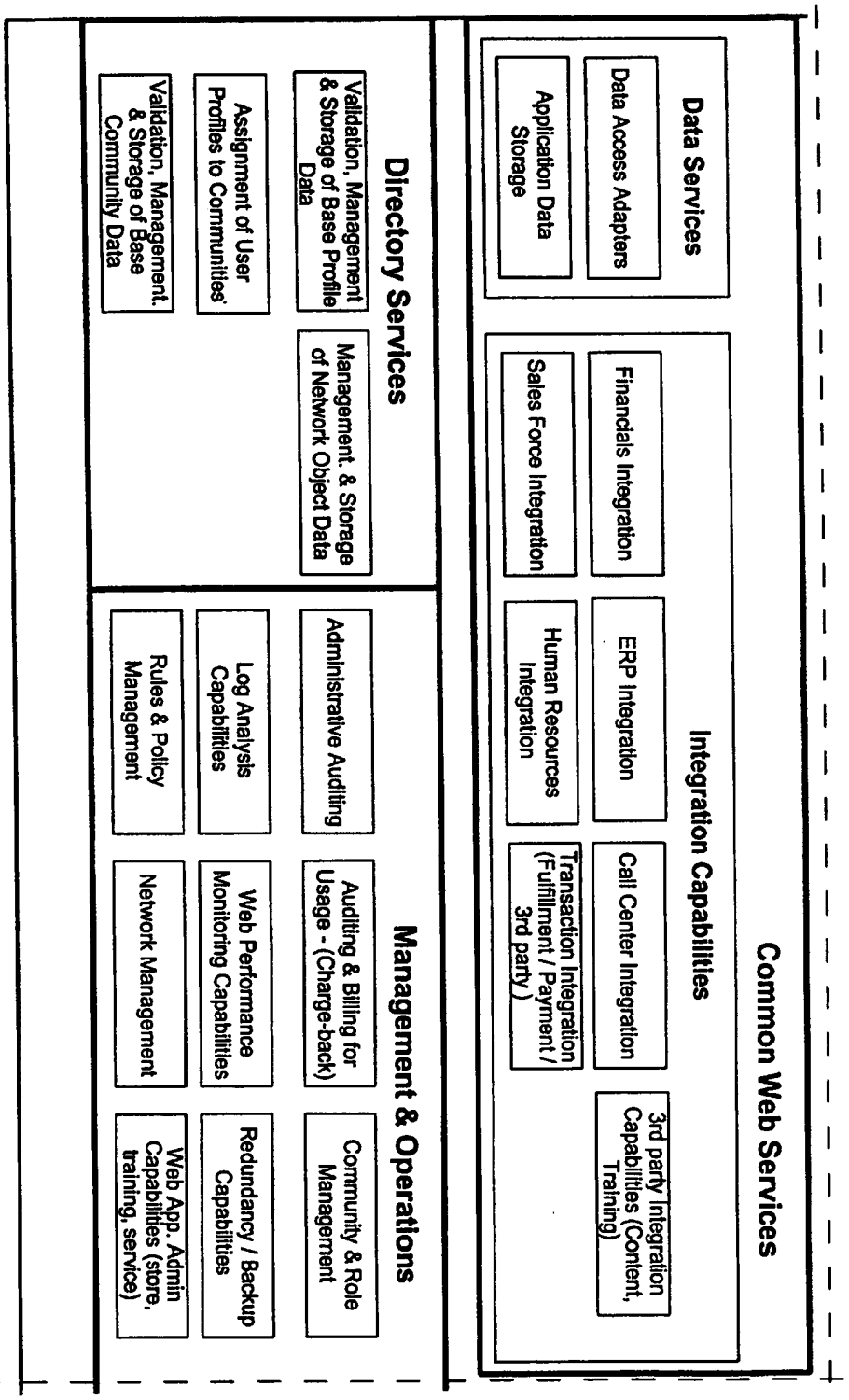

Common Web Services
Integration Capabilities
Data Services
Data Access Adapters
Application Data Storage
Financials Integration
Sales Force Integration
ERP Integration
Human Resources Integration
Call Center Integration
Transaction Integration (Fulfillment / Payment / 3rd party)
3rd party Integration Capabilities (Content, Training)
Directory Services
Validation, Management & Storage of Base Profile Data
Management. & Storage of Network Object Data
Assignment of User Profiles to Communities
Validation, Management. & Storage of Base Community Data
Management & Operations
Administrative Auditing
Log Analysis Capabilities
Rules & Policy Management
Auditing & Billing for Usage - (Charge-back)
Web Performance Monitoring Capabilities
Network Management
Community & Role Management
Redundancy / Backup Capabilities
Web App. Admin Capabilities (store, training, service)

Fig. 21E

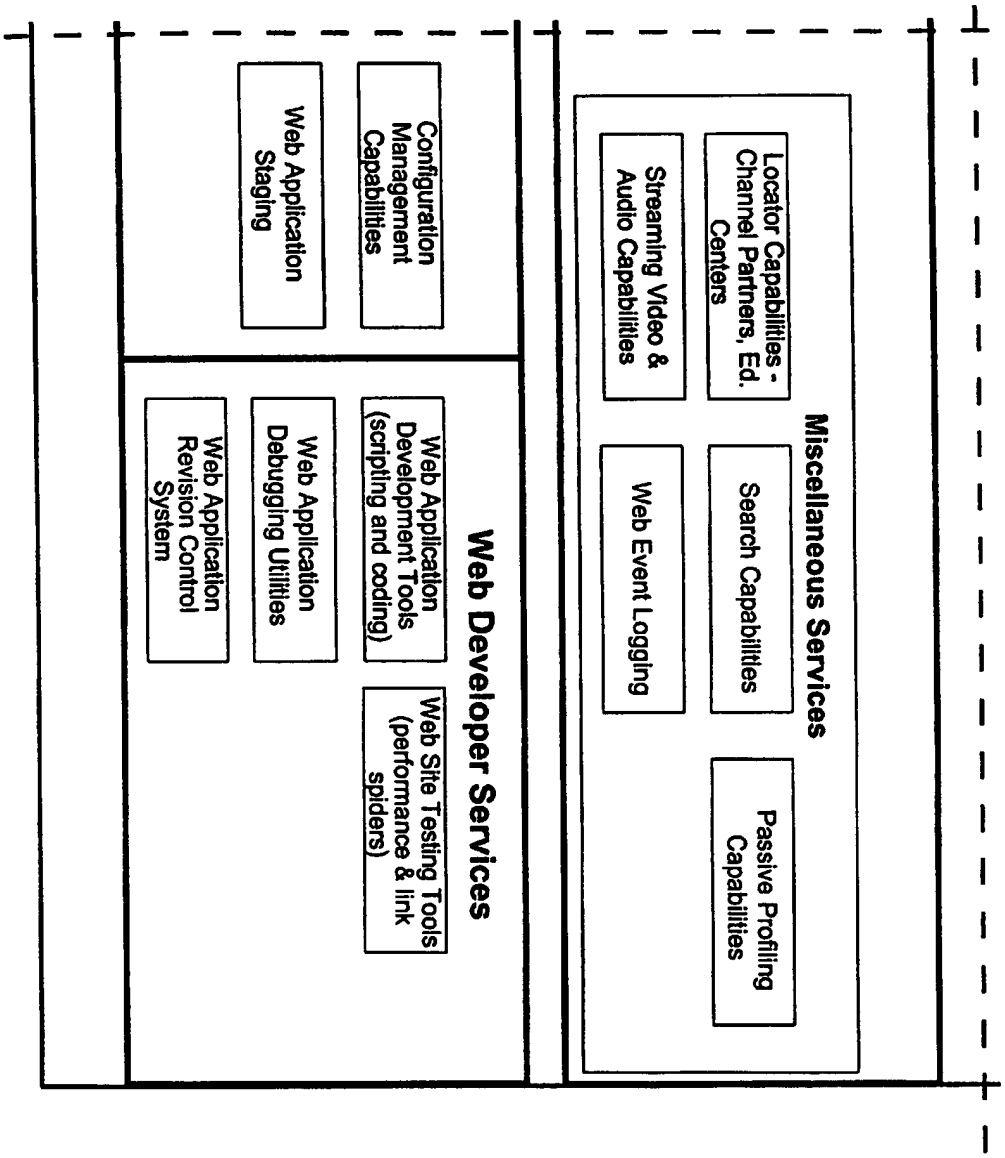

Miscellaneous Services
Locator Capabilities - Channel Partners, Ed. Centers
Search Capabilities
Passive Profiling Capabilities
Streaming Video & Audio Capabilities
Web Event Logging
Web Developer Services
Configuration Management Capabilities
Web Application Staging
Web Application Development Tools (scripting and coding)
Web Site Testing Tools (performance & link spiders)
Web Application Debugging Utilities
Web Application Revision Control System

Fig. 21F

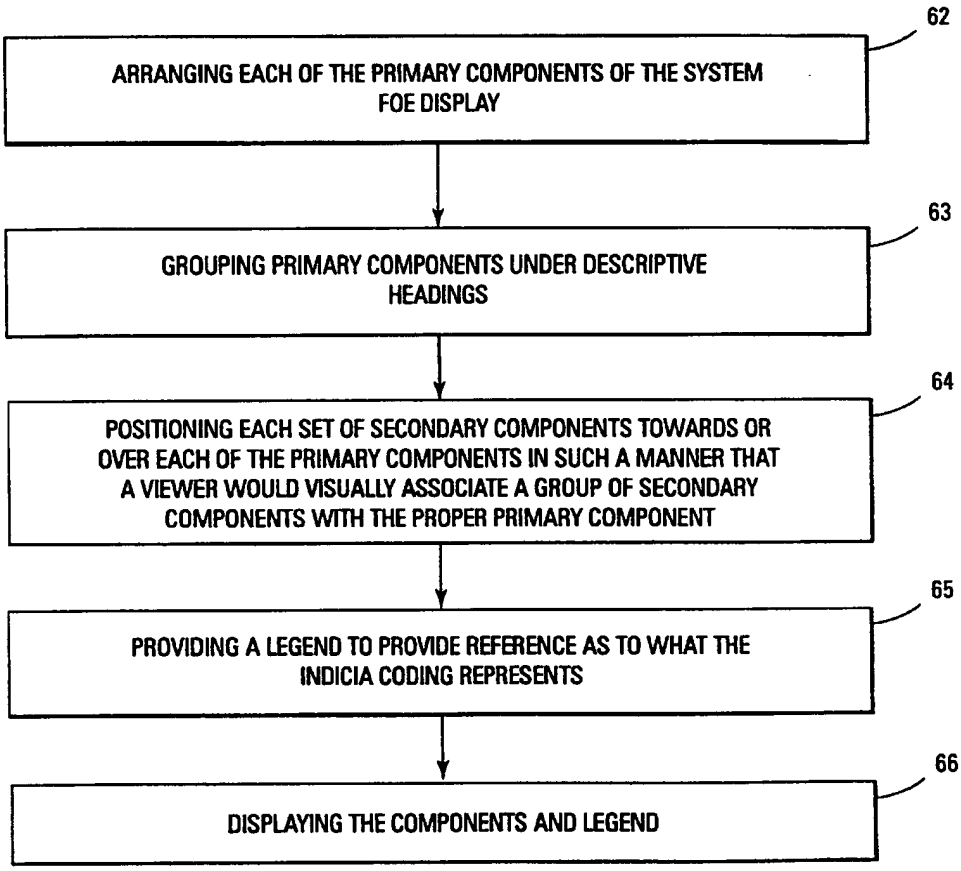

62
ARRANGING EACH OF THE PRIMARY COMPONENTS OF THE SYSTEM FOE DISPLAY
63
GROUPING PRIMARY COMPONENTS UNDER DESCRIPTIVE HEADINGS
64
POSITIONING EACH SET OF SECONDARY COMPONENTS TOWARDS OR OVER EACH OF THE PRIMARY COMPONENTS IN SUCH A MANNER THAT A VIEWER WOULD VISUALLY ASSOCIATE A GROUP OF SECONDARY COMPONENTS WITH THE PROPER PRIMARY COMPONENT
65
PROVIDING A LEGEND TO PROVIDE REFERENCE AS TO WHAT THE INDICIA CODING REPRESENTS
66
DISPLAYING THE COMPONENTS AND LEGEND

Fig. 22

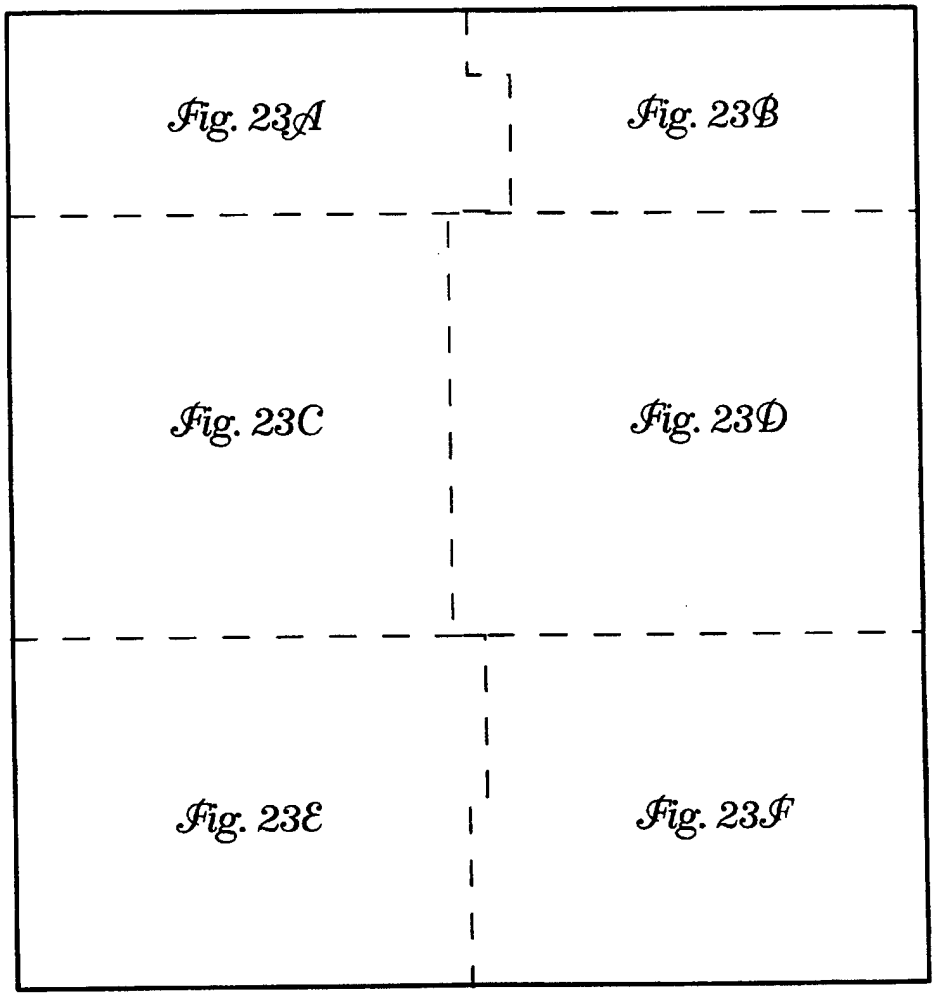


Fig. 23

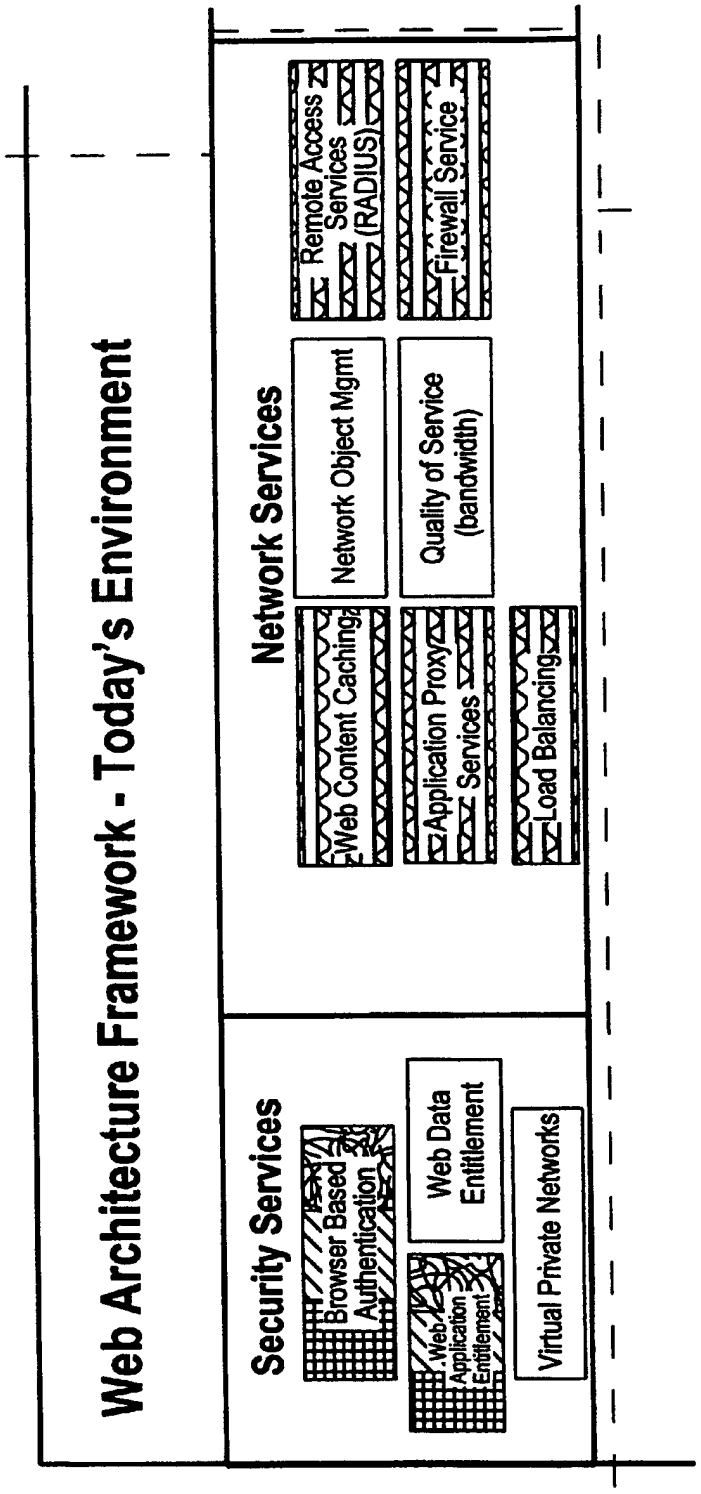

Web Architecture Framework - Today's Environment
Network Services
Remote Access Services (RADIUS)
Firewall Service
Network Object Mgmt
Quality of Service (bandwidth)
Web Content Caching
Application Proxy Services
Load Balancing
Security Services
Browser Based Authentication
Web Application Entitlement
Web Data Entitlement
Virtual Private Networks

Fig. 23A

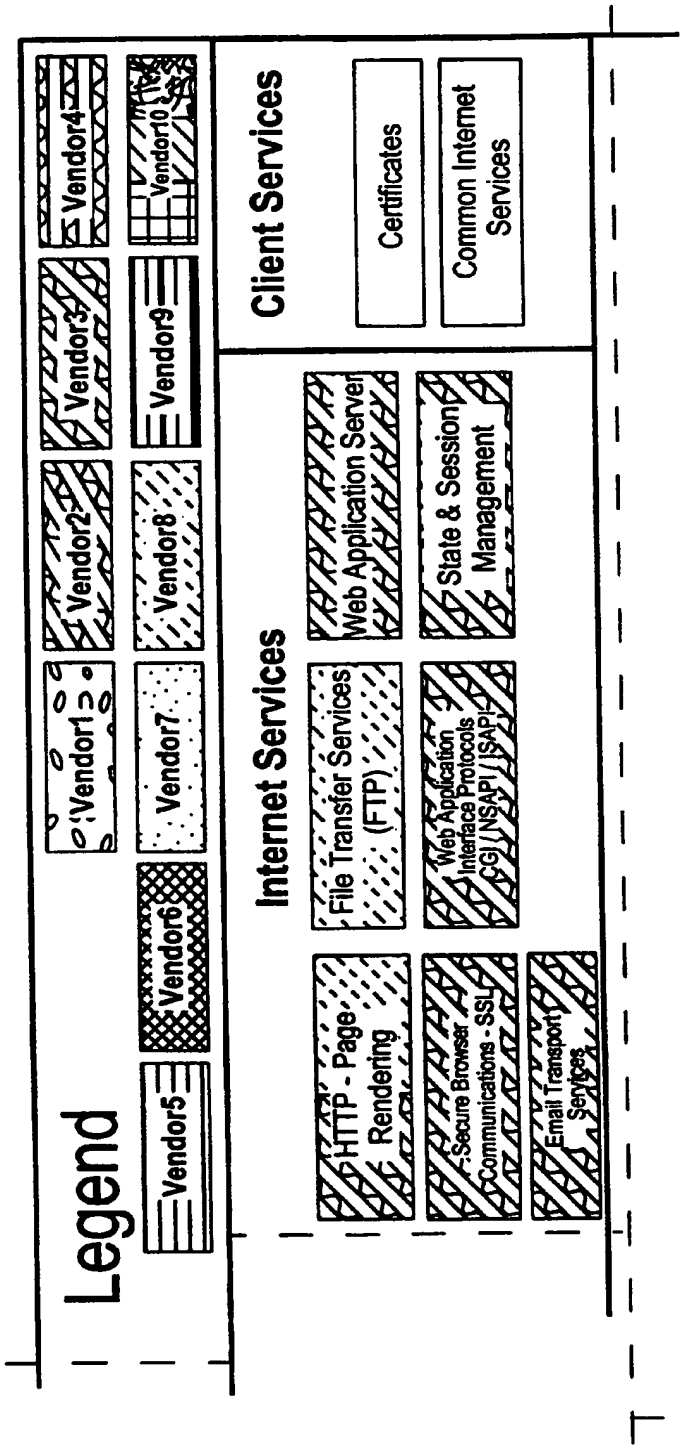

Legend
Vendor1
Vendor2
Vendor3
Vendor4
Vendor5
Vendor6
Vendor7
Vendor8
Vendor9
Vendor10
Internet Services
HTTP - Page Rendering
File Transfer Services (FTP)
Web Application Server
Secure Browser Communications - SSL
Web Application Interface Protocols CGI /NSAPI /ISAPI
State & Session Management
Email Transport Services
Client Services
Certificates
Common Internet Services

Fig. 23B

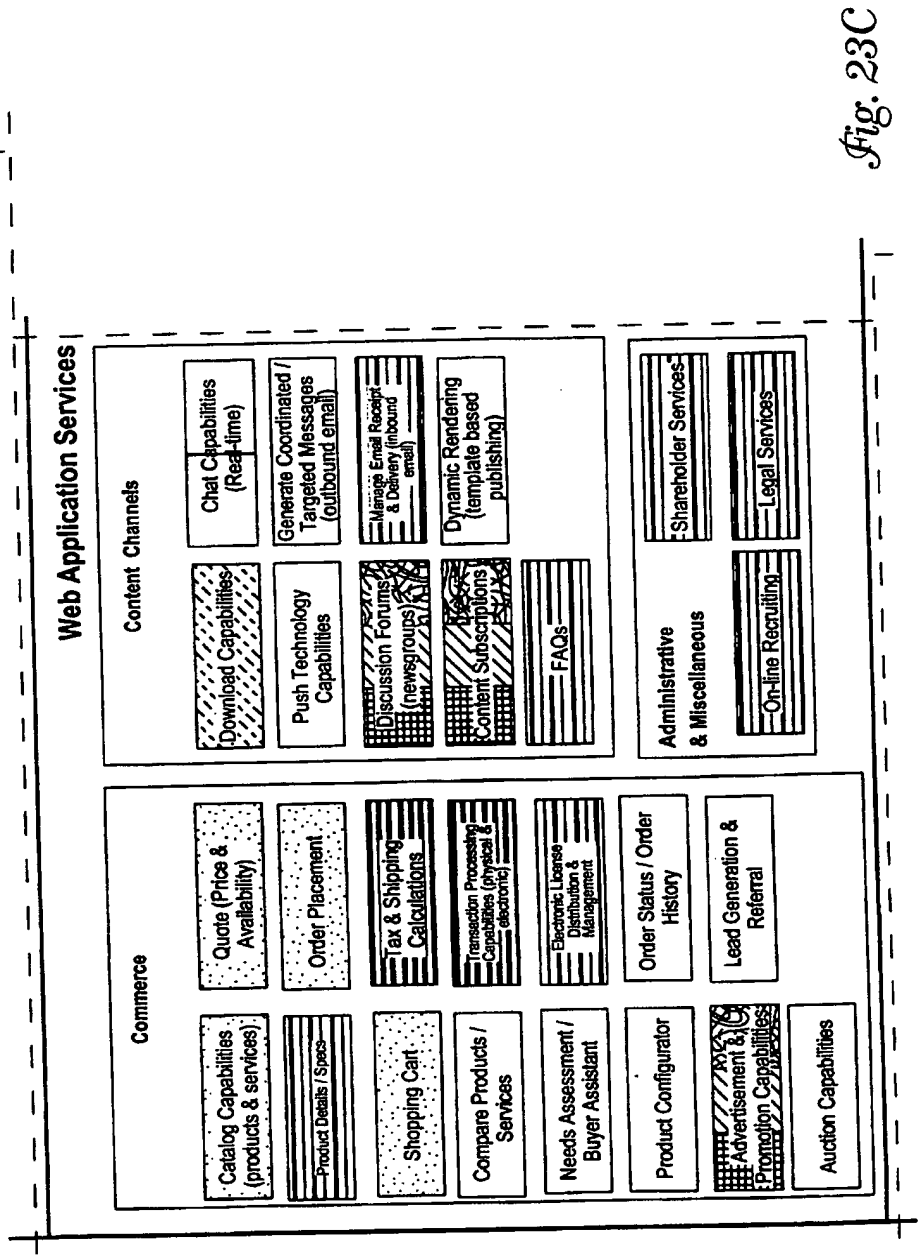

Web Application Services
Content Channels
Chat Capabilities (Real-time)
Generate Coordinated / Targeted Messages (outbound email)
Manage Email Receipt & Delivery (inbound email)
Dynamic Rendering (template based publishing)
Download Capabilities
Push Technology Capabilities
Discussion Forums (newsgroups)
Content Subscriptions
FAQs
Administrative & Miscellaneous
Shareholder Services
Legal Services
On-line Recruiting
Commerce
Catalog Capabilities (products & services)
Quote (Price & Availability)
Order Placement
Tax & Shipping Calculations
Transaction Processing Capabilities (physical & electronic)
Electronic License Distribution & Management
Order Status / Order History
Lead Generation & Referral
Product Details / Specs
Shopping Cart
Compare Products / Services
Needs Assessment / Buyer Assistant
Product Configurator
Advertisement & Promotion Capabilities
Auction Capabilities

Fig. 23C

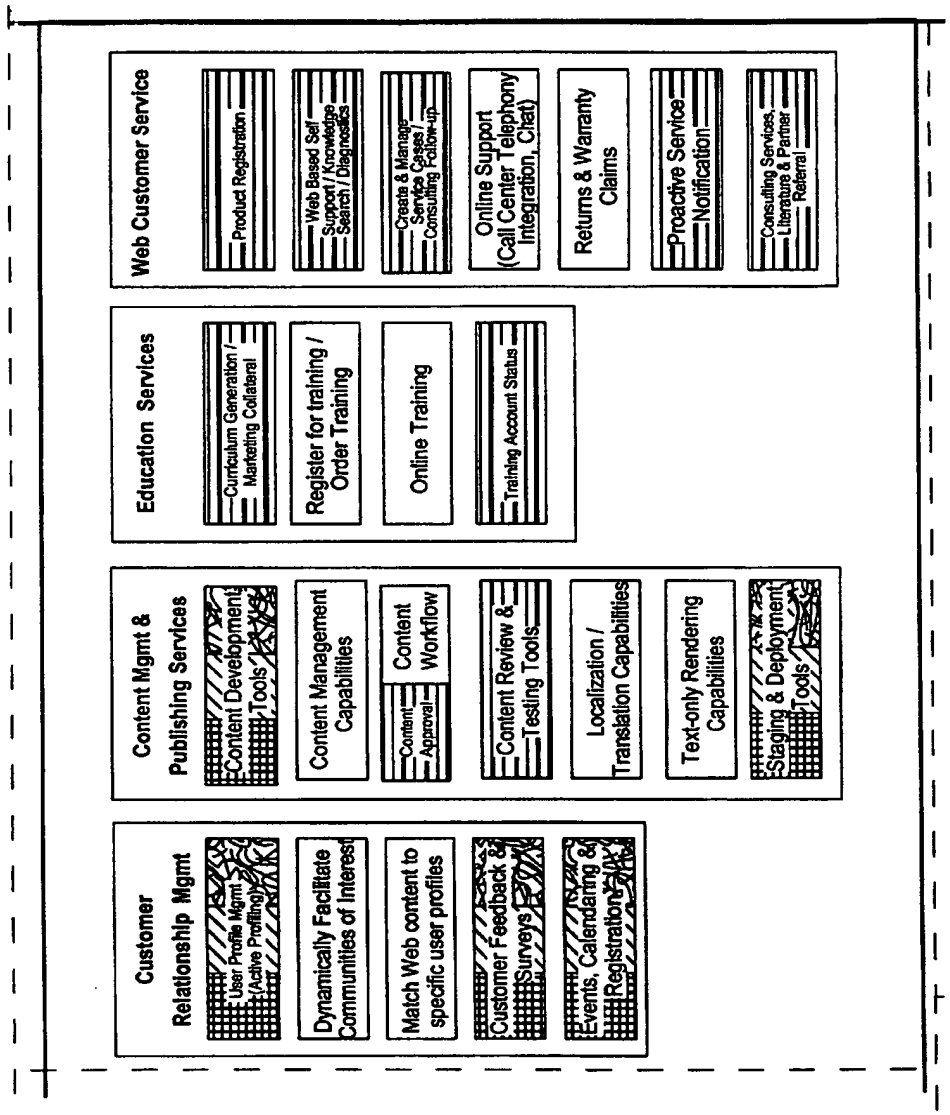

Web Customer Service
Product Registration
Web Based Self Support / Knowledge Search / Diagnostics
Create & Manage Service Case / Consulting Follow-up
Online Support (Call Center Telephony Integration, Chat)
Returns & Warranty Claims
Proactive Service Notification
Consulting Services, Literature & Partner Referral
Education Services
Curriculum Generation / Marketing Collateral
Register for training / Order Training
Online Training
Training Account Status
Content Mgmt & Publishing Services
Content Development Tools
Content Management Capabilities
Content Workflow
Content Approval
Content Review & Testing Tools
Localization / Translation Capabilities
Text-only Rendering Capabilities
Staging & Deployment Tools
Customer Relationship Mgmt
User Profile Mgmt (Active Profiling)
Dynamically Facilitate Communities of Interest
Match Web content to specific user profiles
Customer Feedback & Surveys
Events, Calendaring & Registration

Fig. 23D

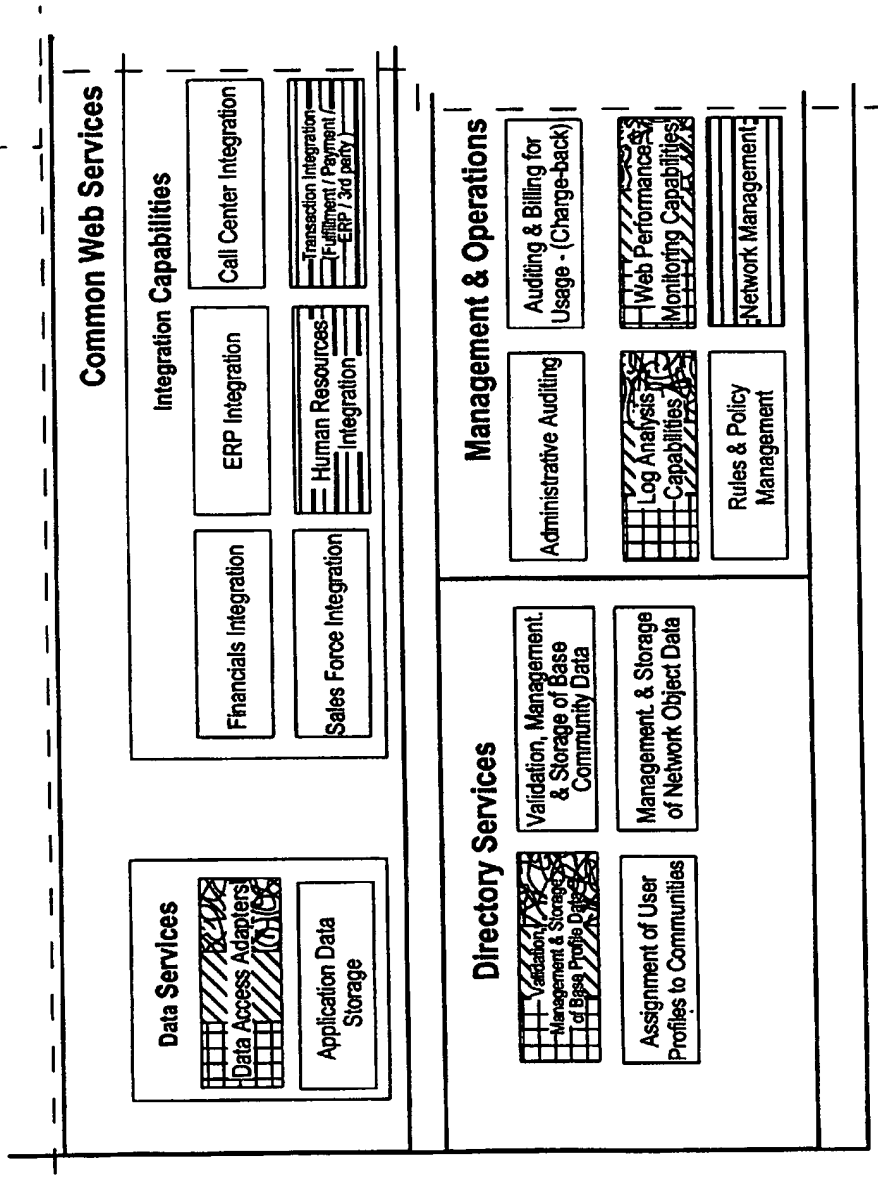

Common Web Services
Integration Capabilities
Call Center Integration
ERP Integration
Financials Integration
Transaction Integration (Fulfillment / Payment / ERP / 3rd party)
Human Resources Integration
Sales Force Integration
Data Services
Data Access Adapters
Application Data Storage
Management & Operations
Auditing & Billing for Usage - (Charge-back)
Administrative Auditing
Web Performance & Monitoring Capabilities
Log Analysis Capabilities
Network Management
Rules & Policy Management
Directory Services
Validation, Management & Storage of Base Community Data
Management & Storage of Network Object Data
Validation, Management & Storage of Base Profile Data
Assignment of User Profiles to Communities

Fig. 23E

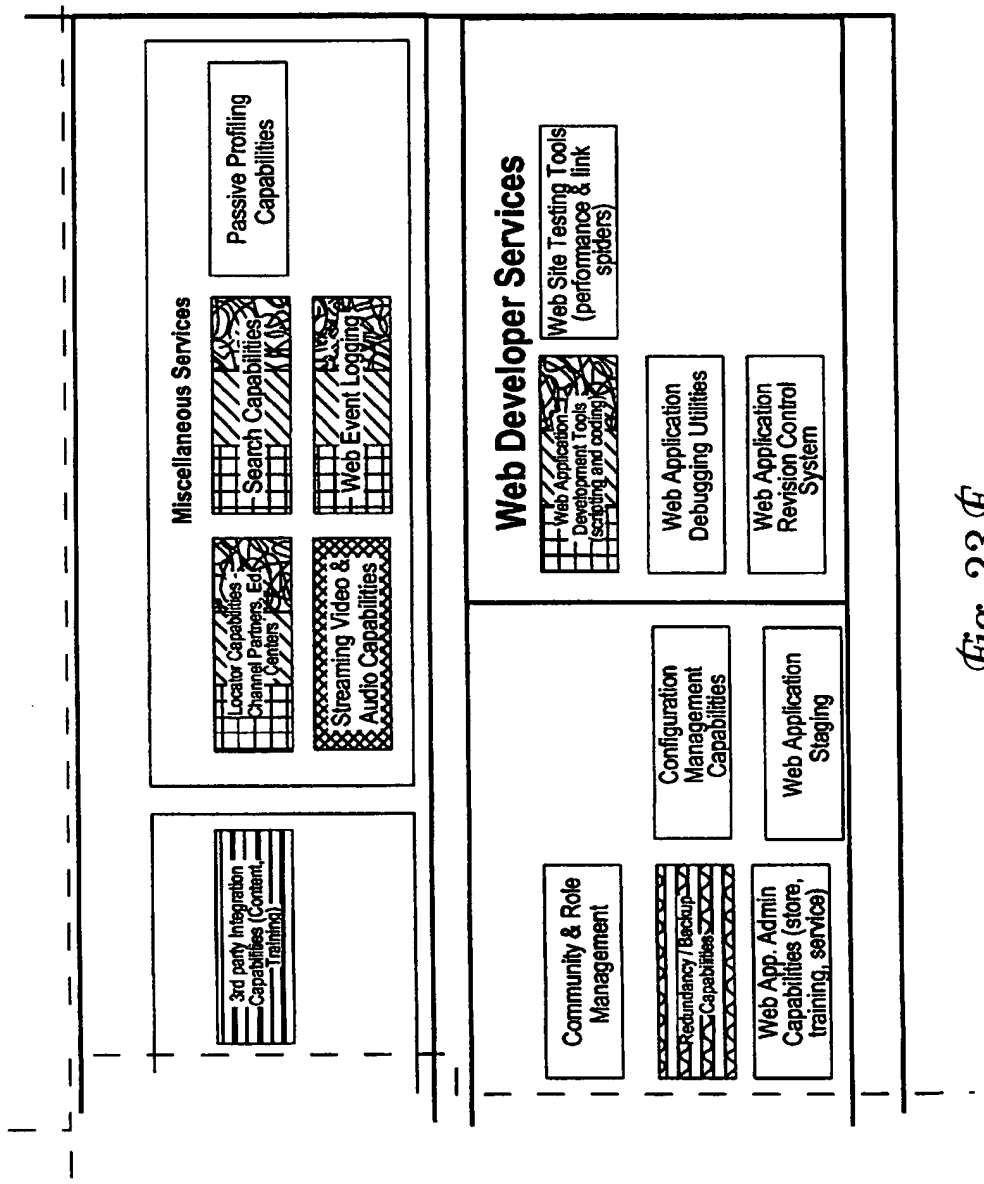

Miscellaneous Services
Passive Profiling Capabilities
Search Capabilities
Locator Capabilities (Channel Partners, Ed Centers)
Web Event Logging
Streaming Video & Audio Capabilities
3rd party Integration Capabilities (Content, Training)
Web Developer Services
Web Site Testing Tools (performance & link spiders)
Web Application Development Tools (scripting and coding)
Web Application Debugging Utilities
Web Application Revision Control System
Configuration Management Capabilities
Web Application Staging
Community & Role Management
Redundancy / Backup Capabilities
Web App. Admin Capabilities (store, training, service)

Fig. 23F

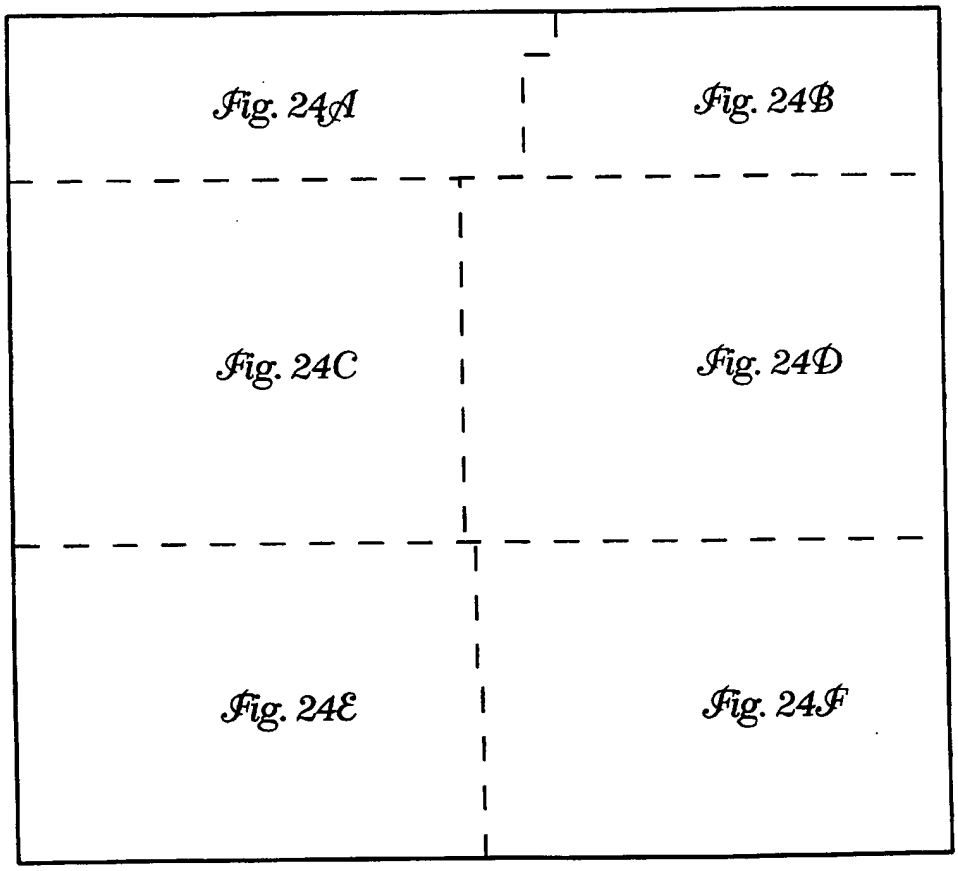


Fig. 24

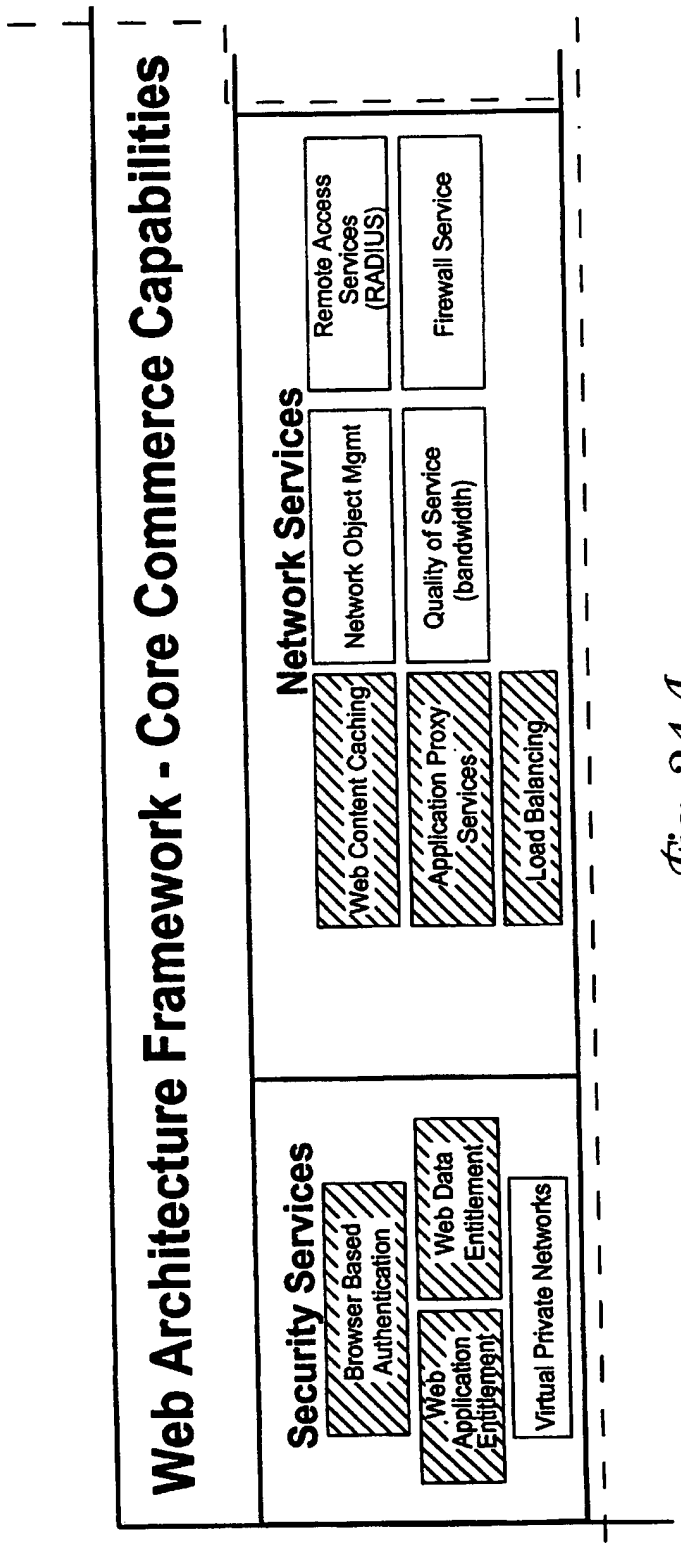

Web Architecture Framework - Core Commerce Capabilities
Network Services
Remote Access Services (RADIUS)
Firewall Service
Network Object Mgmt
Quality of Service (bandwidth)
Web Content Caching
Application Proxy Services
Load Balancing
Security Services
Browser Based Authentication
Web Application Entitlement
Web Data Entitlement
Virtual Private Networks

Fig. 24A

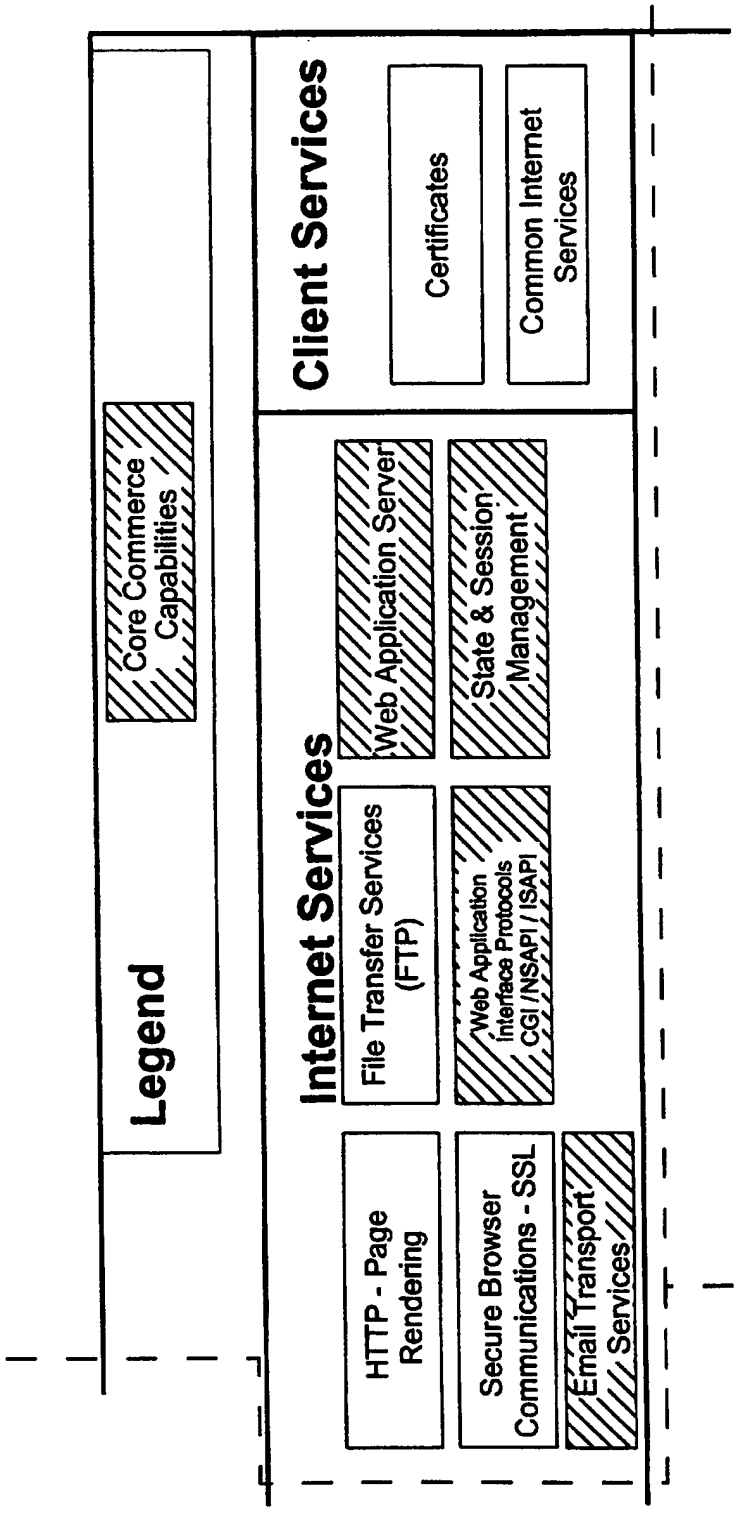
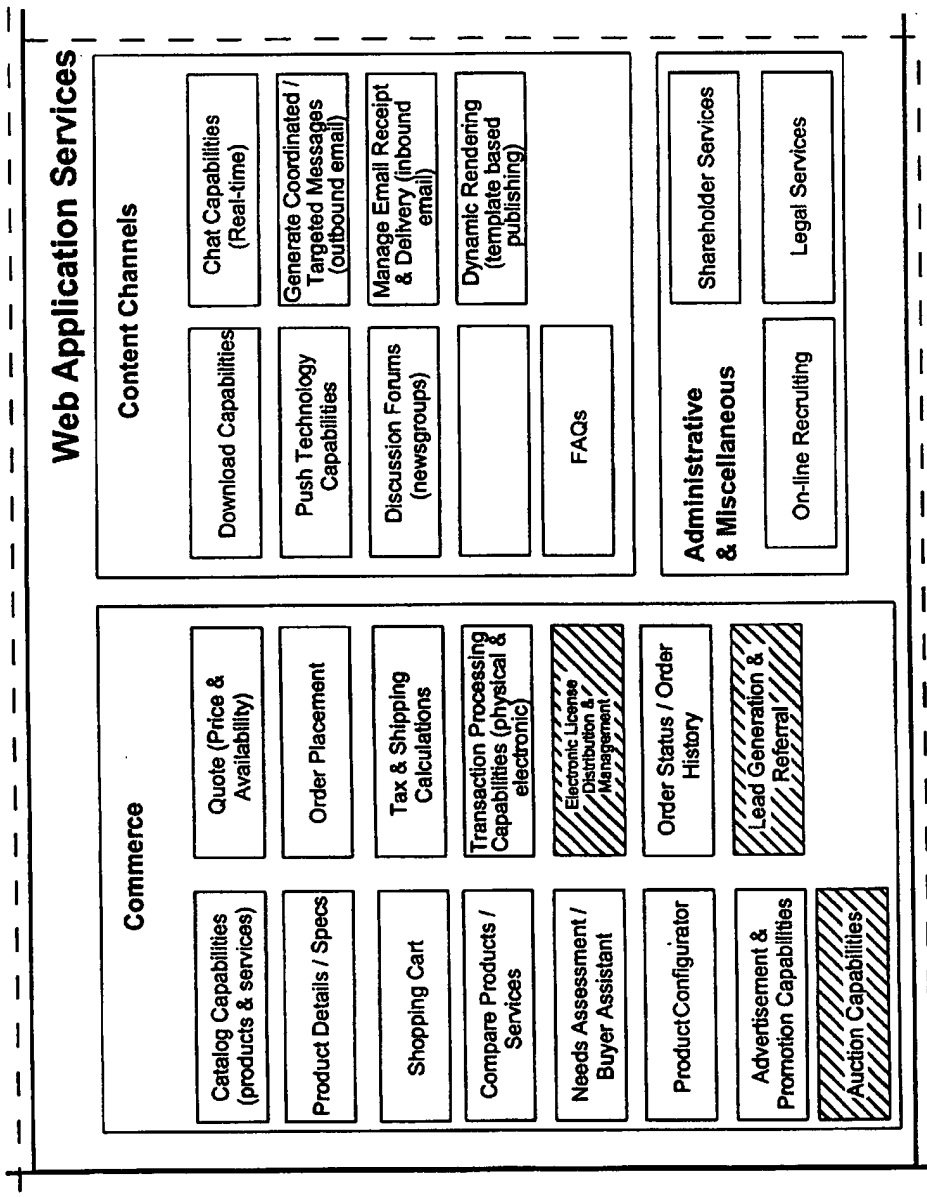

Legend
Core Commerce Capabilities
Client Services
Certificates
Common Internet Services
Internet Services
Web Application Server
State & Session Management
File Transfer Services (FTP)
Web Application Interface Protocols CGI /NSAPI / ISAPI
HTTP - Page Rendering
Secure Browser Communications - SSL
Email Transport Services

Fig. 24B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Shopping Cart
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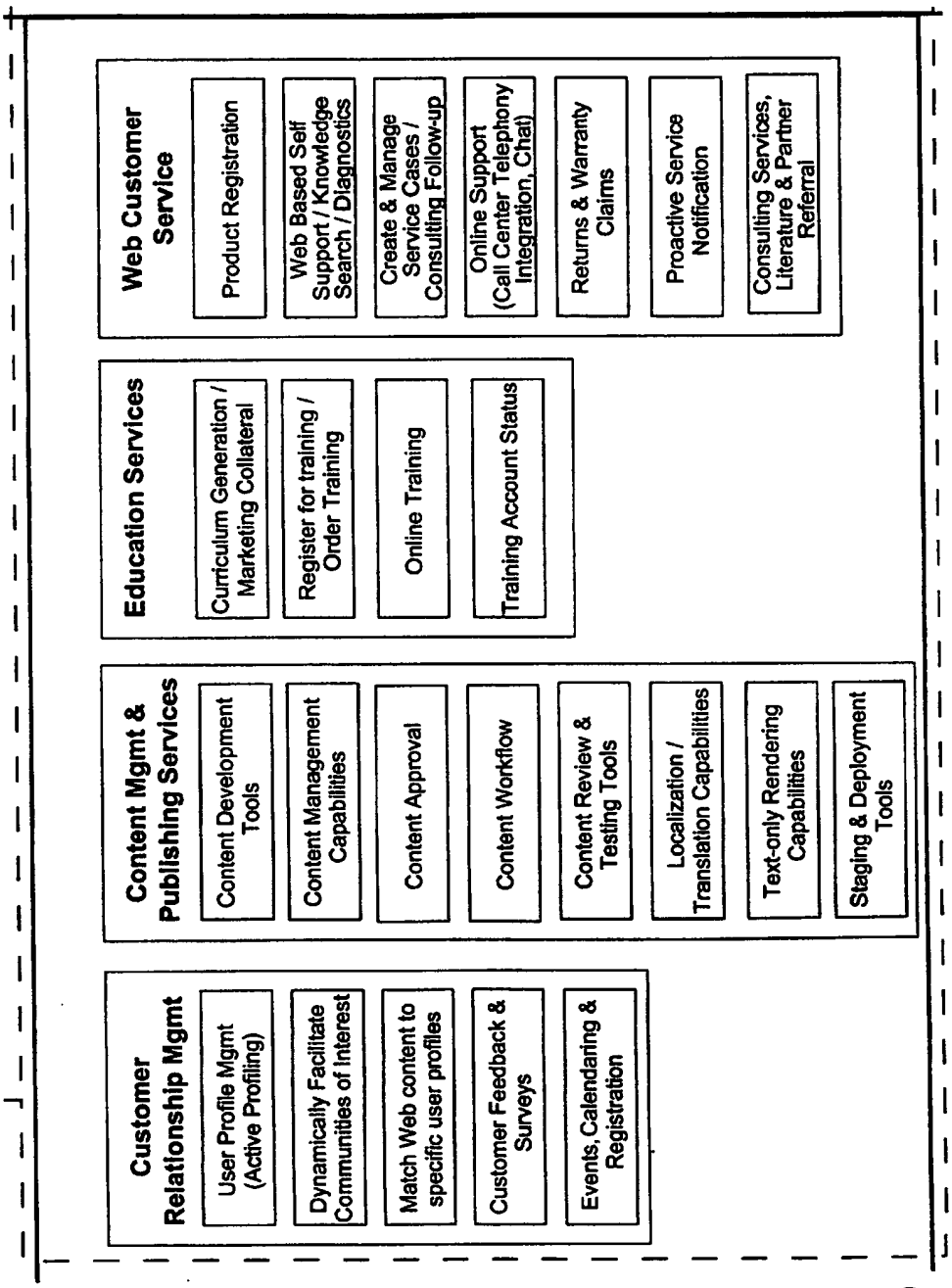
Manage Email Receipt & Delivery (inbound email)
Dynamic Rendering (template based publishing)
FAQs
Administrative & Miscellaneous
Shareholder Services
On-line Recruiting
Legal Services

Fig. 24C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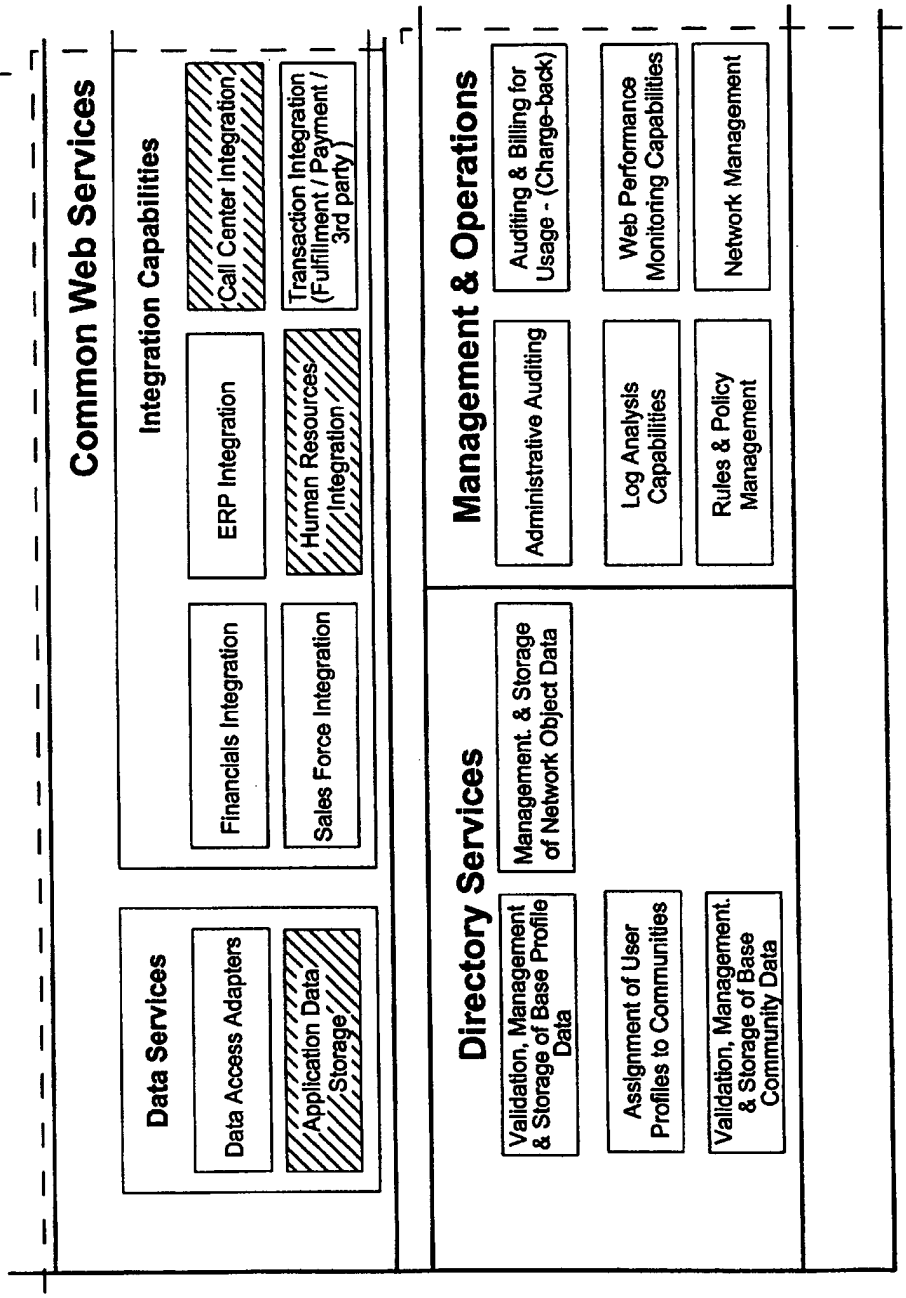
Online Support (Call Center Telephony Integration, Chat)
Returns & Warranty Claims
Proactive Service Notification
Consulting Services, Literature & Partner Referral

Fig. 24D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Application Data Storage
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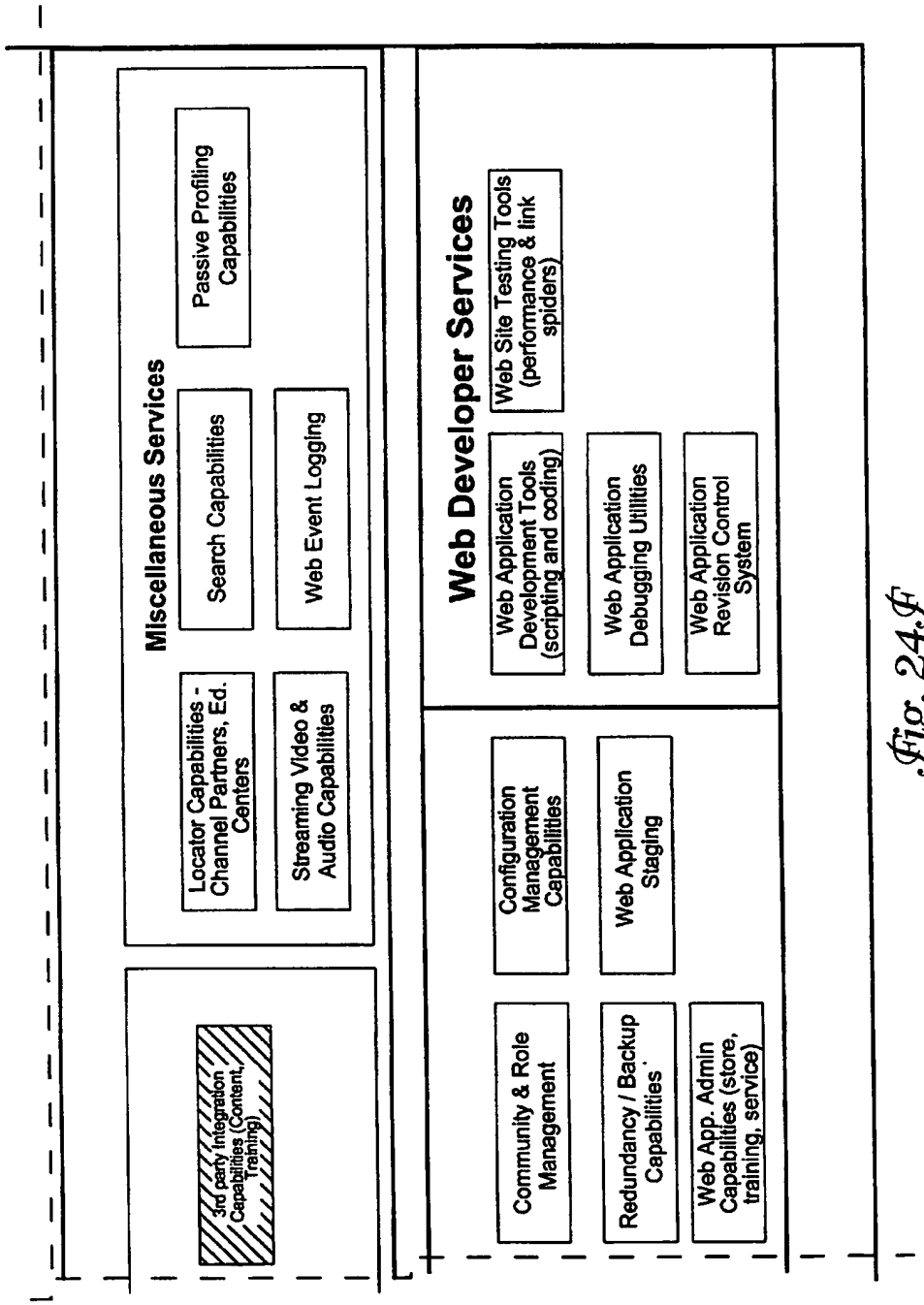
Sales Force Integration
ERP Integration
Human Resources Integration
Call Center Integration
Transaction Integration (Fulfillment / Payment / 3rd party)
Directory Services
Validation, Management & Storage of Base Profile Data
Assignment of User Profiles to Communities
Validation, Management. & Storage of Base Community Data
Management. & Storage of Network Object Data
Management & Operations
Administrative Auditing
Log Analysis Capabilities
Rules & Policy Management
Auditing & Billing for Usage - (Charge-back)
Web Performance Monitoring Capabilities
Network Management

Fig. 24E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Web Application Staging
Community & Role Management
Redundancy / Backup Capabilities
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Fig. 24F

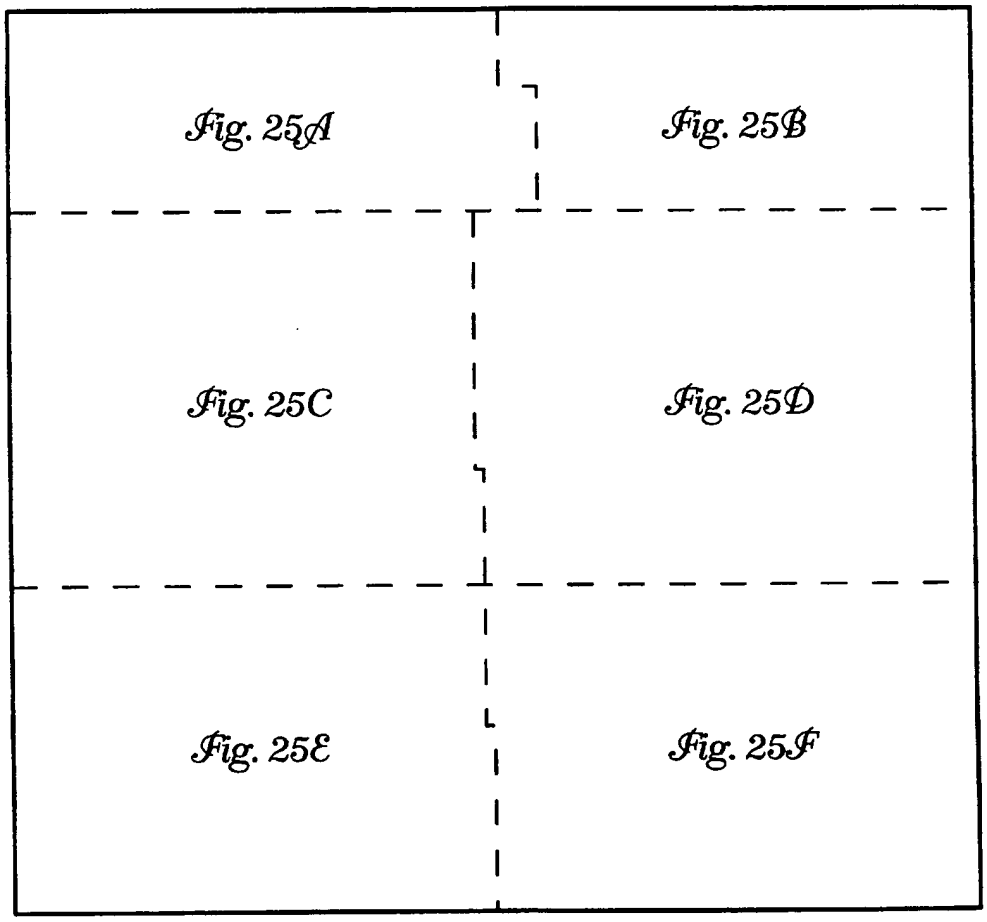


Fig. 25

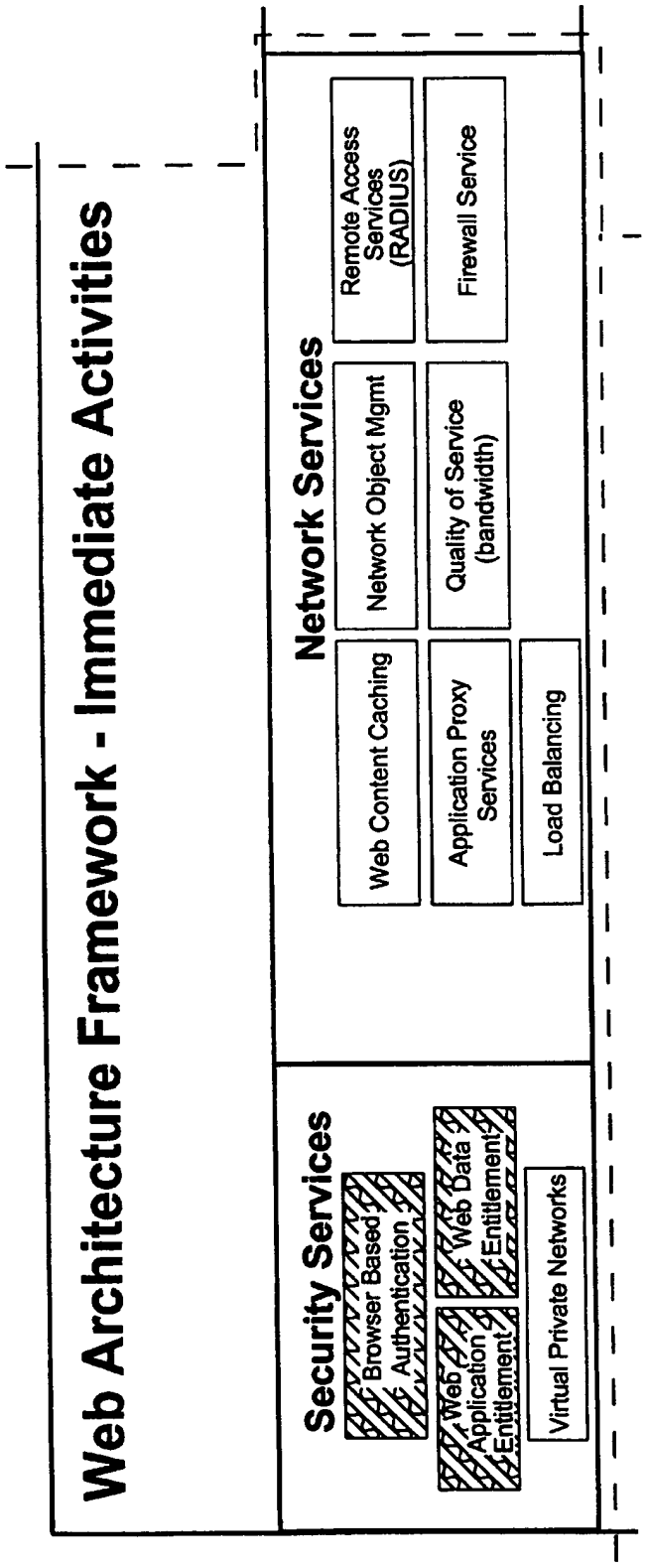

Web Architecture Framework - Immediate Activities
Security Services
Browser Based Authentication
Web Application Entitlement
Web Data Entitlement
Virtual Private Networks
Network Services
Web Content Caching
Application Proxy Services
Load Balancing
Network Object Mgmt
Quality of Service (bandwidth)
Remote Access Services (RADIUS)
Firewall Service

Fig. 25A

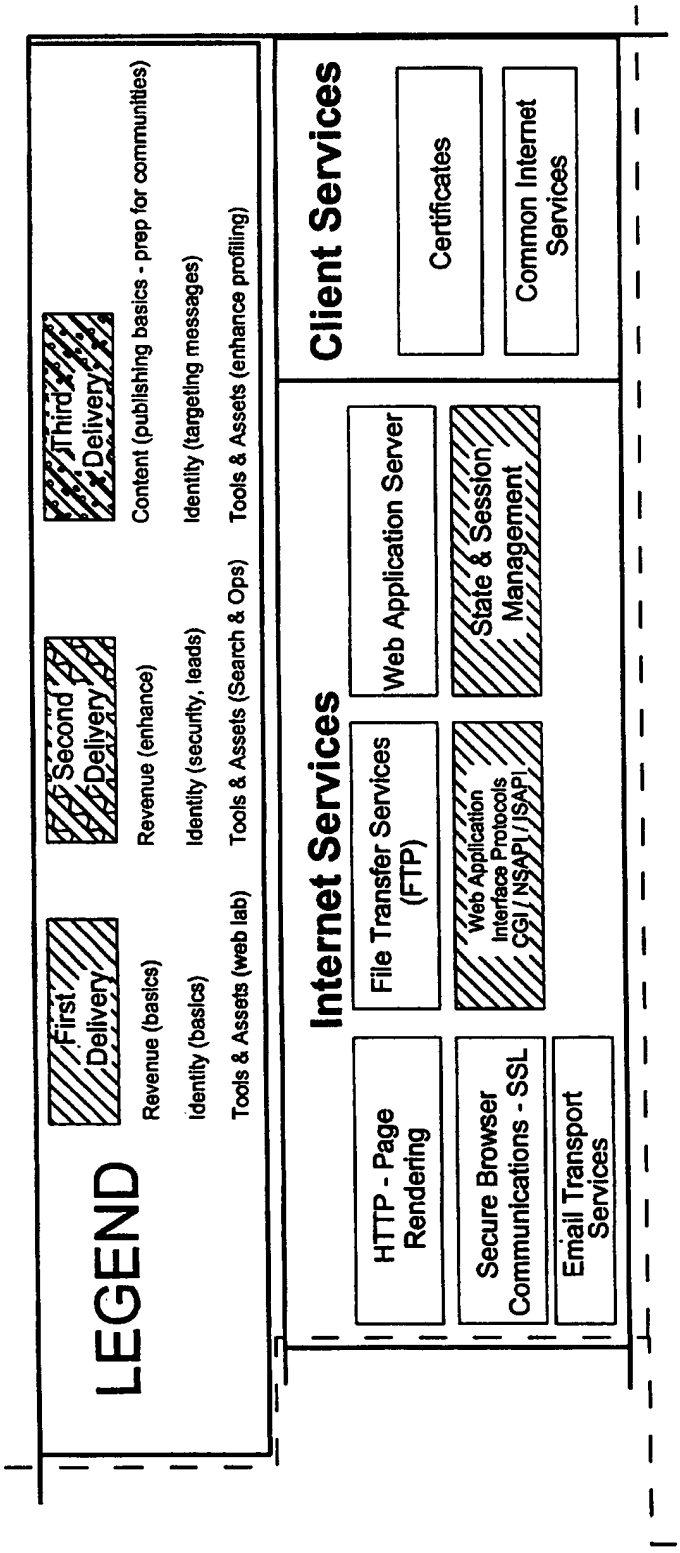
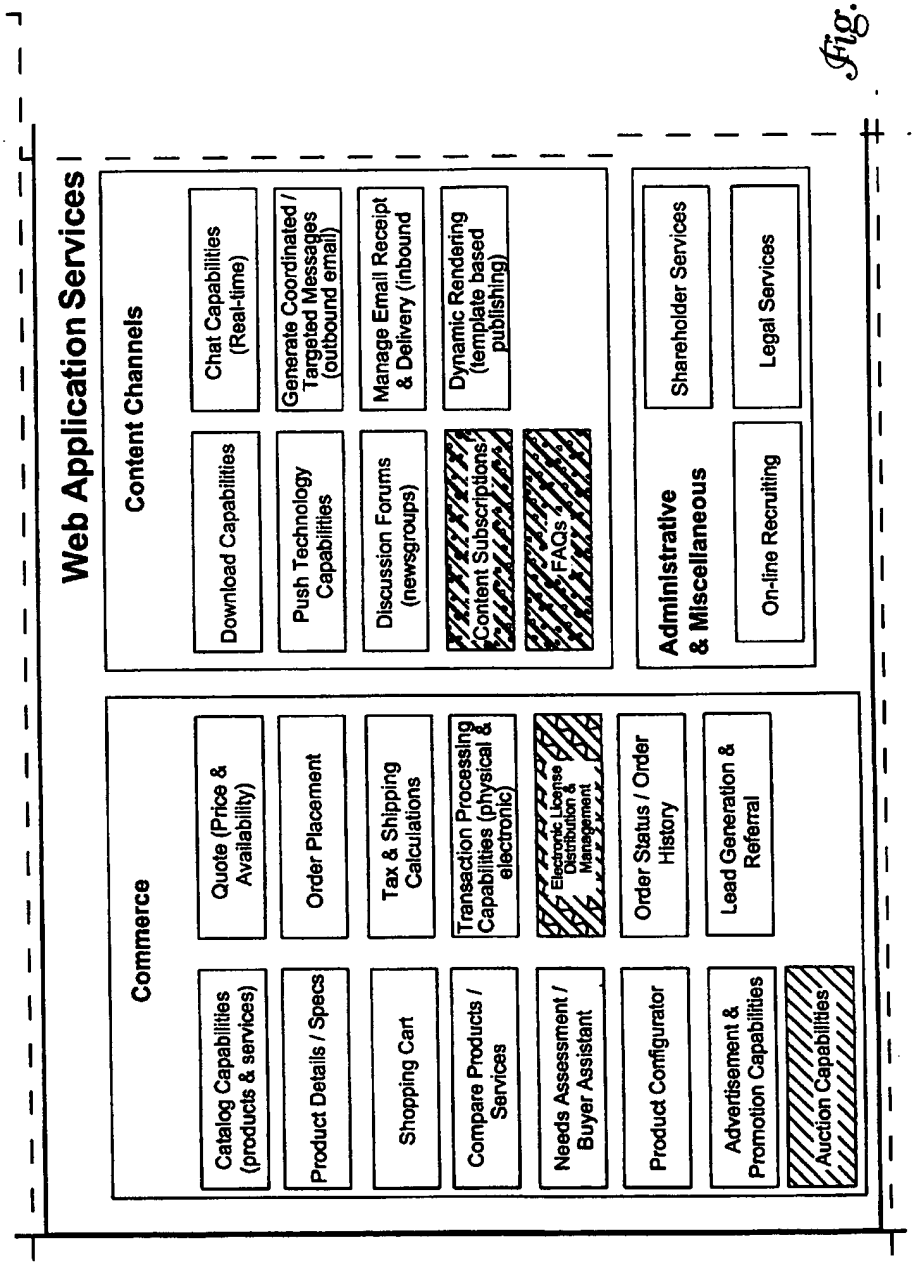

LEGEND
First Delivery
Revenue (basics)
Identity (basics)
Tools & Assets (web lab)
Second Delivery
Revenue (enhance)
Identity (security, leads)
Tools & Assets (Search & Ops)
Third Delivery
Content (publishing basics - prep for communities)
Identity (targeting messages)
Tools & Assets (enhance profiling)
Internet Services
HTTP - Page Rendering
Secure Browser Communications - SSL
Email Transport Services
File Transfer Services (FTP)
Web Application Interface Protocols CGI / NSAPI / ISAPI
Web Application Server
State & Session Management
Client Services
Certificates
Common Internet Services

Fig. 25B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Content Subscriptions
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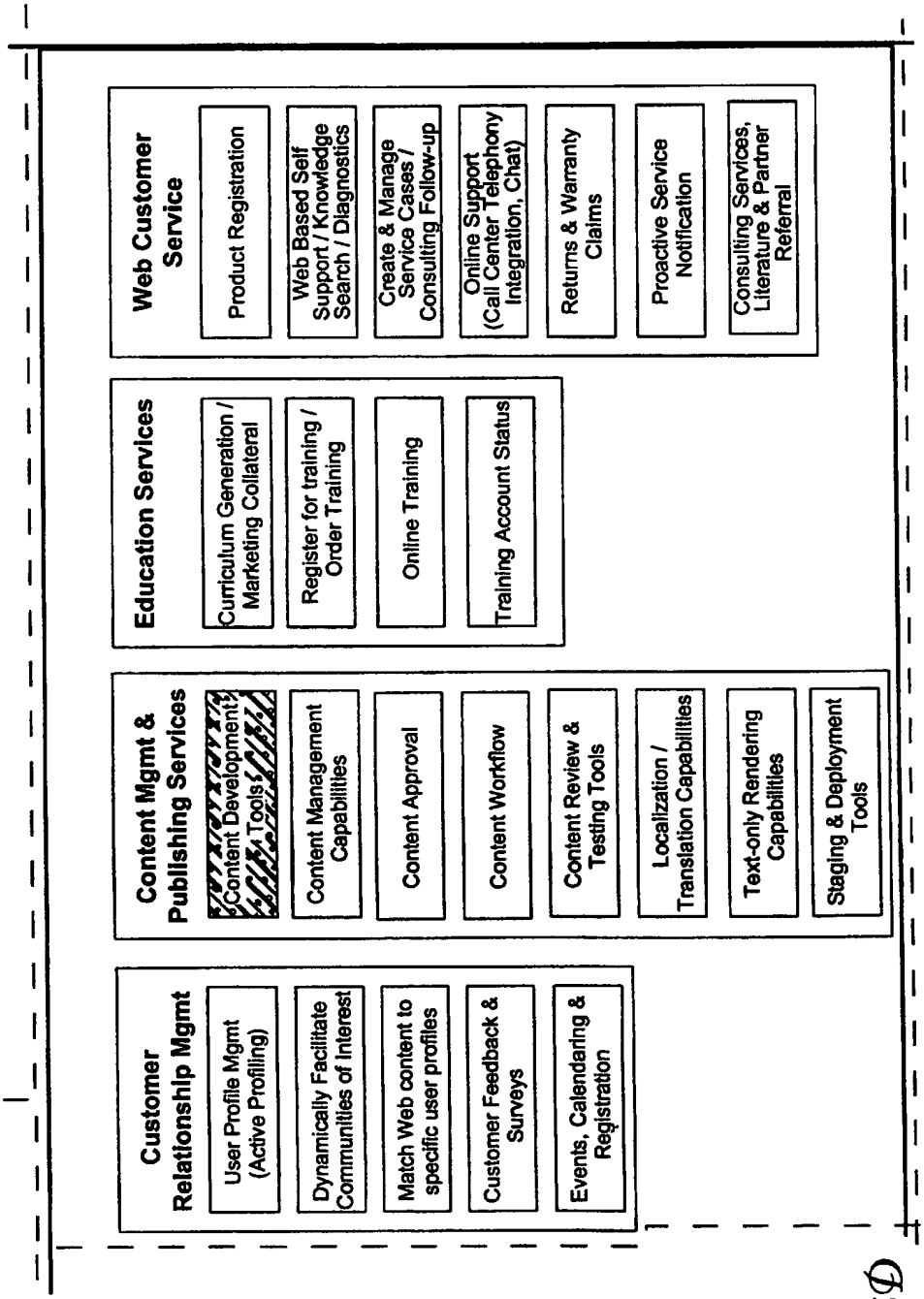
FAQs
Administrative & Miscellaneous
Shareholder Services
On-line Recruiting
Legal Services

Fig. 25C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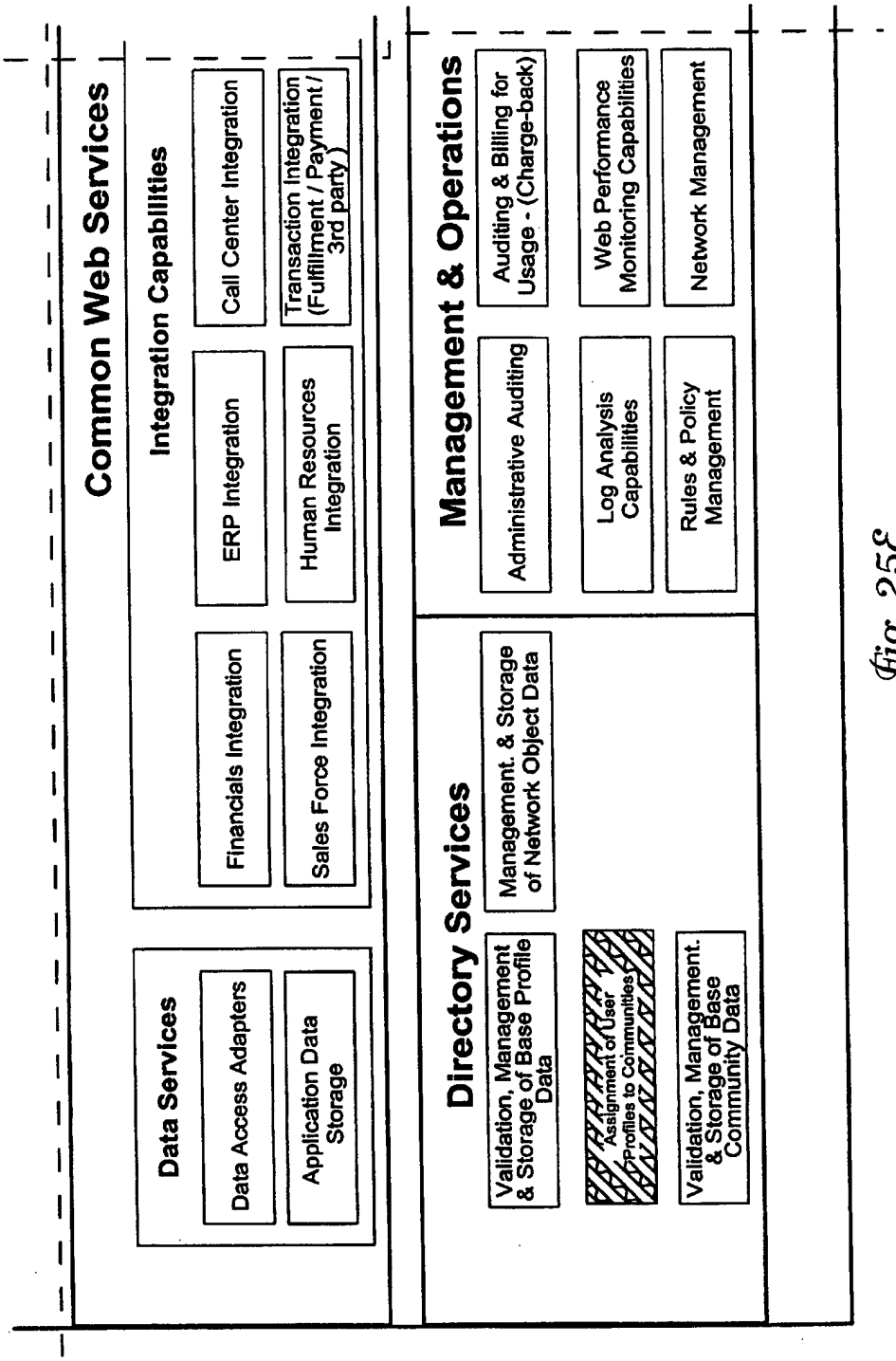
Proactive Service Notification
Consulting Services, Literature & Partner Referral

Fig. 25D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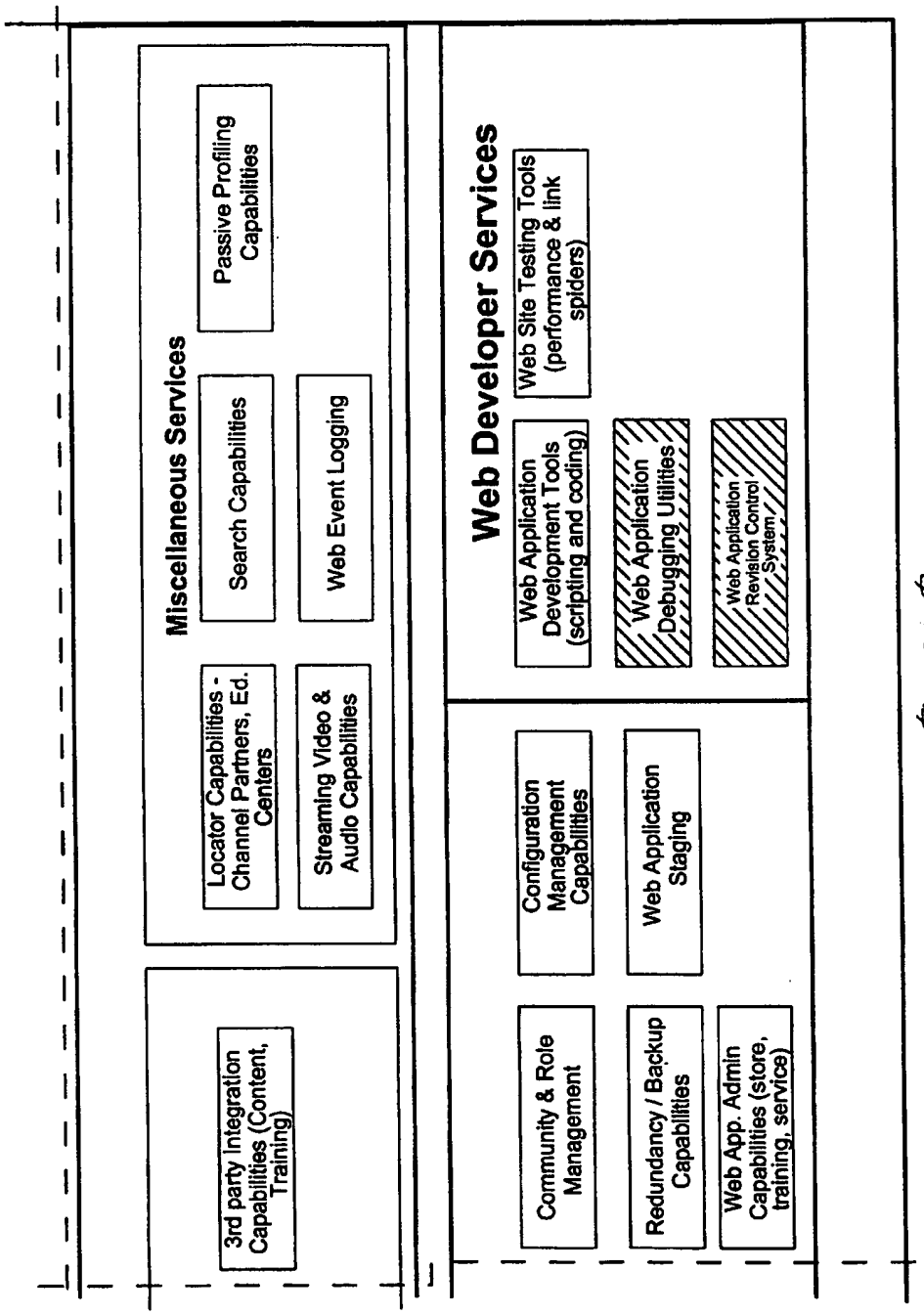
Validation, Management. & Storage of Base Community Data
Management & Operations
Administrative Auditing
Auditing & Billing for Usage - (Charge-back)
Log Analysis Capabilities
Web Performance Monitoring Capabilities
Rules & Policy Management
Network Management

Fig. 25E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Web Application Development Tools (scripting and coding)
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Web Application Revision Control System
Configuration Management Capabilities
Web Application Staging
Community & Role Management
Redundancy / Backup Capabilities
Web App. Admin Capabilities (store, training, service)

Fig. 25F

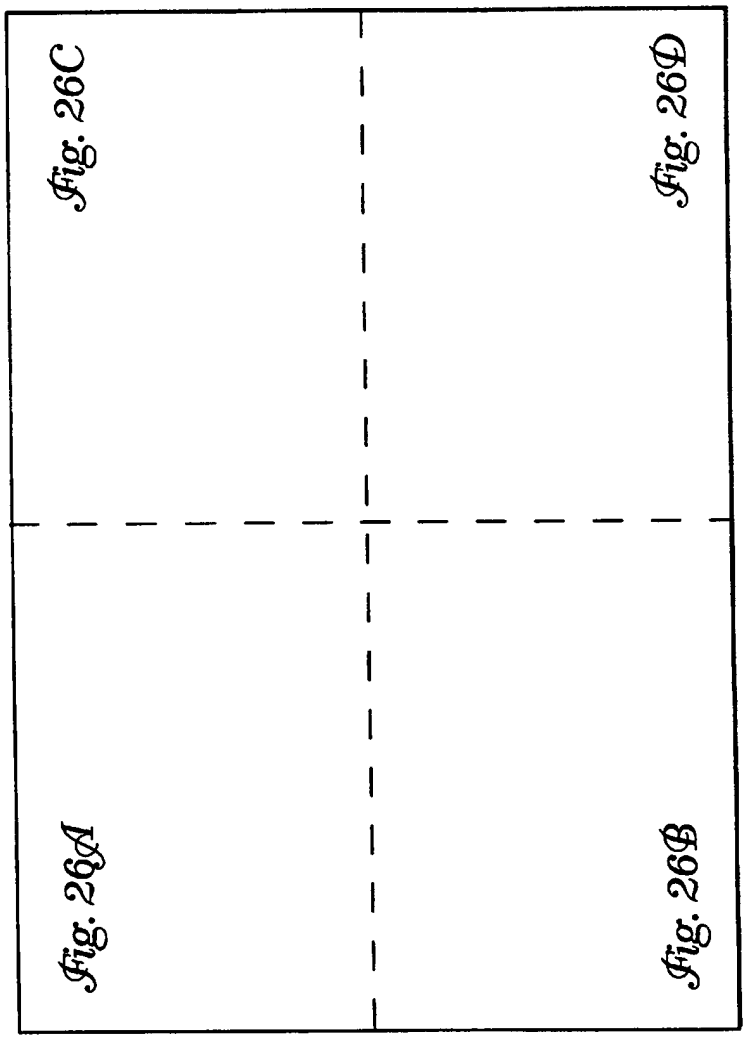


Fig. 26

Fig. 26A

Core Commerce Capabilities - Infrastructure Services

Core Capabilities	Existing Capabilities
Browser Based Authentication	Verifies user identity using built-in browser functionality
	Maintains authentication information throughout sessions
	Utilizes centralized directory of profiles
	Provides LDAP compatibility
	Provides NDS Compatibility
Web Application Entitlement	Restricts access to specific web applications based upon user privileges
	Determines if a user or group of users have permission to perform an operation in a specific application
	Utilizes centralized directory of profiles for entitlement data
	Provides LDAP compatibility
	Provides NDS compatibility
Web Data Entitlement	Restricts access to web content and data based upon user privileges
	Determines if a user or group of users have permission to manipulate web data (create, read, update, delete)
	Utilizes centralized directory of profiles for entitlement data
	Provides LDAP compatibility
	Provides NDS compatibility

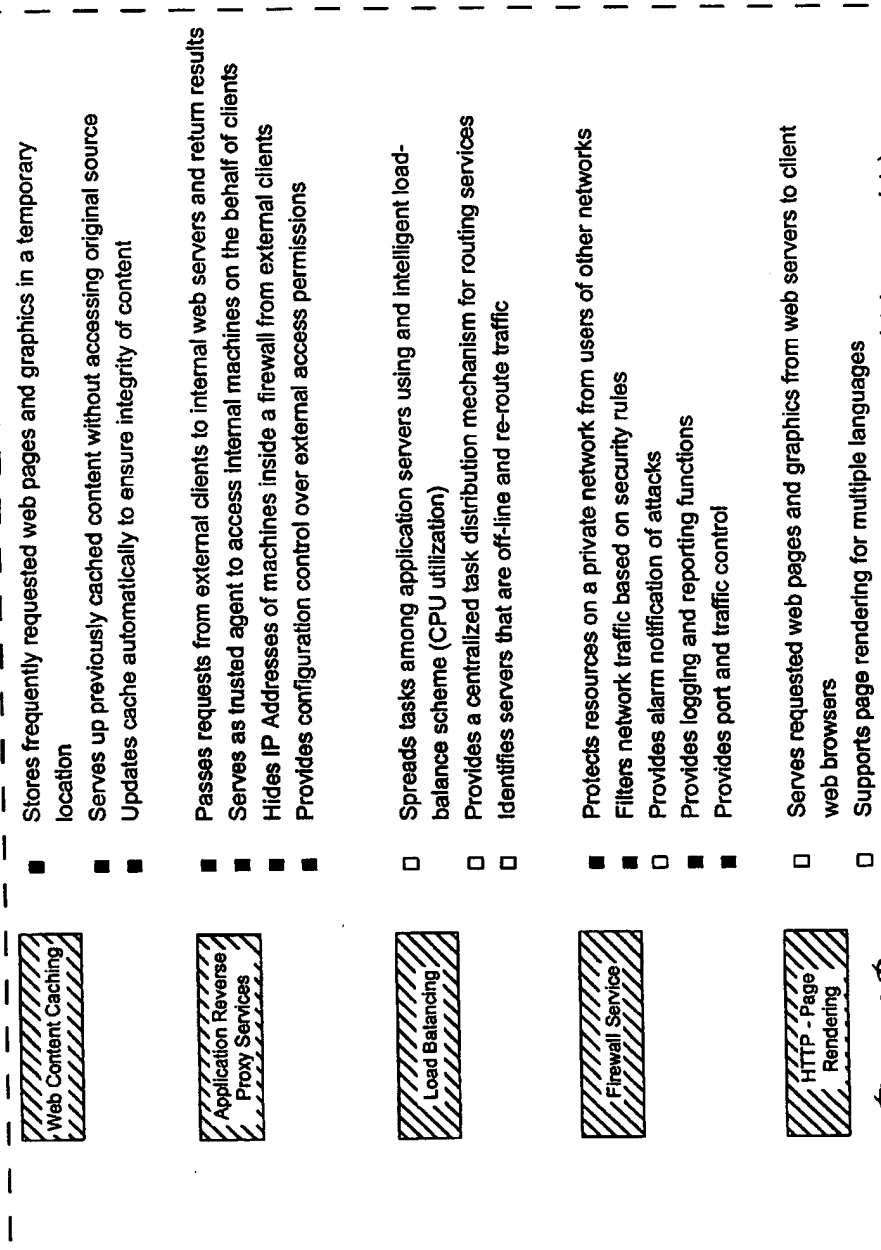

Web Content Caching
Stores frequently requested web pages and graphics in a temporary location
Serves up previously cached content without accessing original source
Updates cache automatically to ensure integrity of content
Application Reverse Proxy Services
Passes requests from external clients to internal web servers and return results
Serves as trusted agent to access internal machines on the behalf of clients
Hides IP Addresses of machines inside a firewall from external clients
Provides configuration control over external access permissions
Load Balancing
Spreads tasks among application servers using and intelligent load-balance scheme (CPU utilization)
Provides a centralized task distribution mechanism for routing services
Identifies servers that are off-line and re-route traffic
Firewall Service
Protects resources on a private network from users of other networks
Filters network traffic based on security rules
Provides alarm notification of attacks
Provides logging and reporting functions
Provides port and traffic control
HTTP - Page Rendering
Serves requested web pages and graphics from web servers to client web browsers
Supports page rendering for multiple languages
Supports multiple content sources (file system, databases, scripts)

Fig. 26B

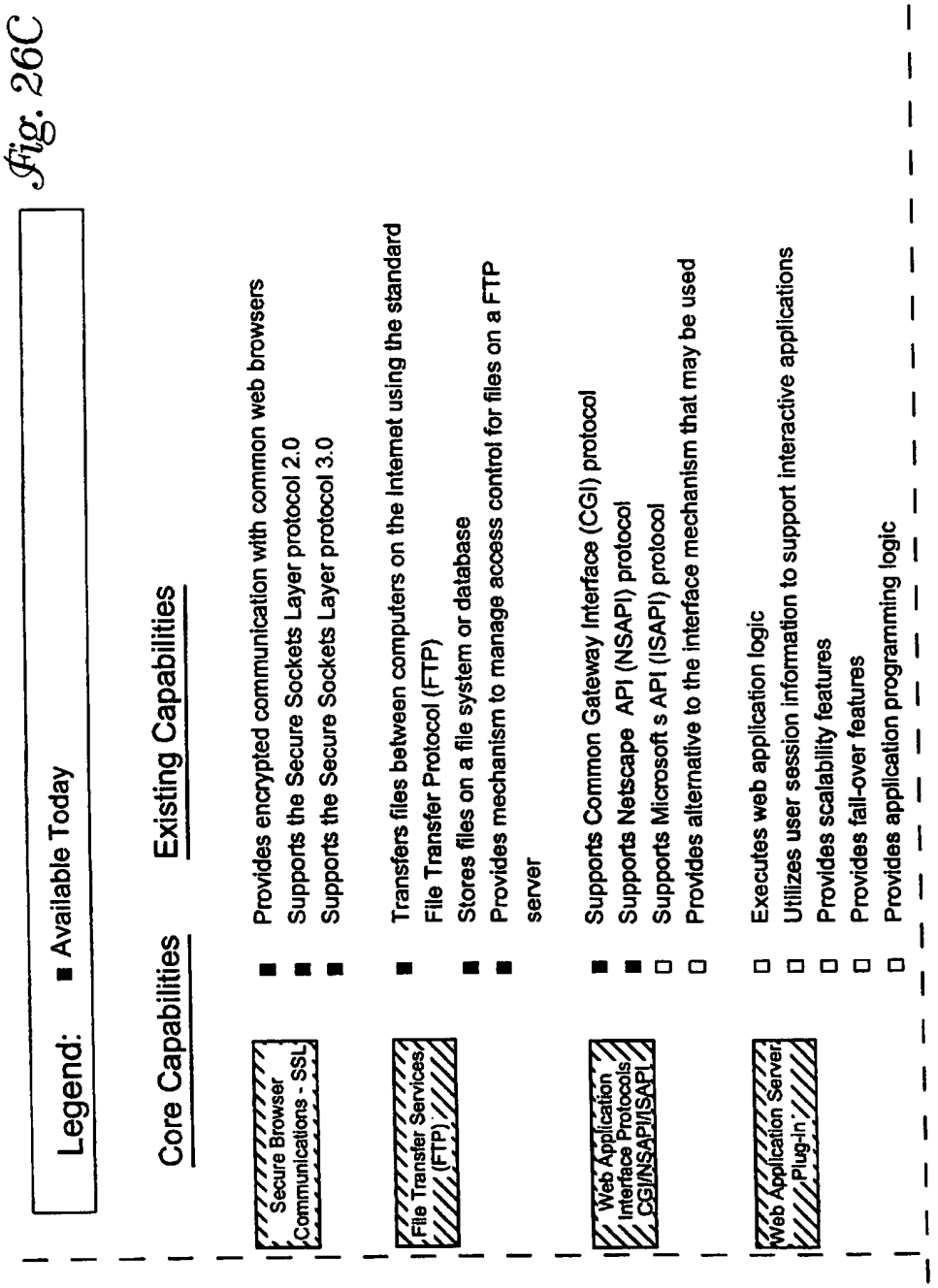

Legend: ■ Available Today
Core Capabilities
Existing Capabilities
Secure Browser Communications - SSL
■ Provides encrypted communication with common web browsers
■ Supports the Secure Sockets Layer protocol 2.0
■ Supports the Secure Sockets Layer protocol 3.0
File Transfer Services (FTP)
■ Transfers files between computers on the Internet using the standard File Transfer Protocol (FTP)
■ Stores files on a file system or database
■ Provides mechanism to manage access control for files on a FTP server
Web Application Interface Protocols CGI/NSAPI/ISAPI
■ Supports Common Gateway Interface (CGI) protocol
■ Supports Netscape API (NSAPI) protocol
□ Supports Microsoft s API (ISAPI) protocol
□ Provides alternative to the interface mechanism that may be used
Web Application Server Plug-in
□ Executes web application logic
□ Utilizes user session information to support interactive applications
□ Provides scalability features
□ Provides fail-over features
□ Provides application programming logic

Fig. 26C

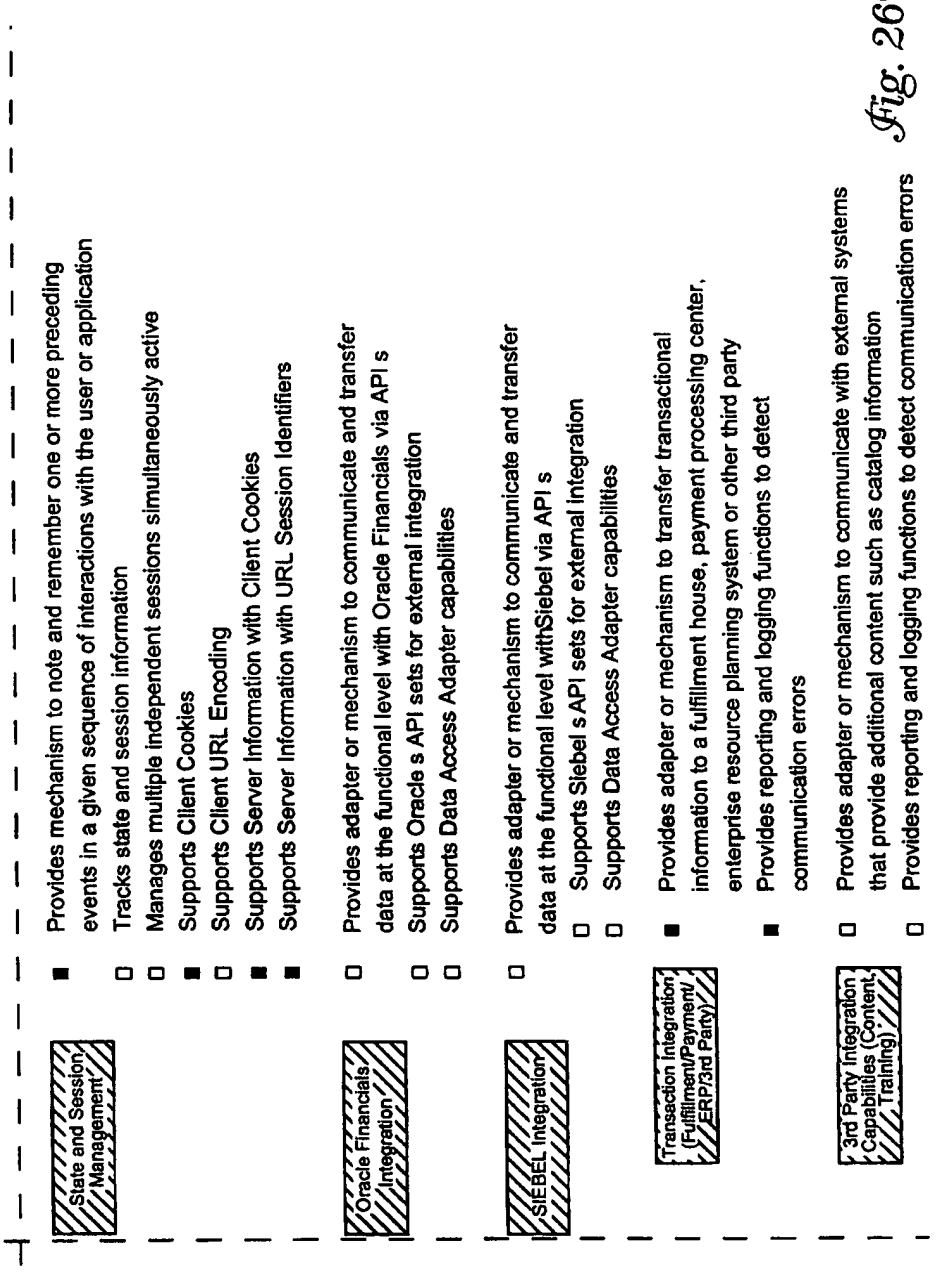

State and Session Management
Provides mechanism to note and remember one or more preceding events in a given sequence of interactions with the user or application
Tracks state and session information
Manages multiple independent sessions simultaneously active
Supports Client Cookies
Supports Client URL Encoding
Supports Server Information with Client Cookies
Supports Server Information with URL Session Identifiers
Oracle Financials Integration
Provides adapter or mechanism to communicate and transfer data at the functional level with Oracle Financials via API s
Supports Oracle s API sets for external integration
Supports Data Access Adapter capabilities
SIEBEL Integration
Provides adapter or mechanism to communicate and transfer data at the functional level withSiebel via API s
Supports Siebel s API sets for external integration
Supports Data Access Adapter capabilities
Transaction Integration (Fulfillment/Payment/ ERP/3rd Party)
Provides adapter or mechanism to transfer transactional information to a fulfillment house, payment processing center, enterprise resource planning system or other third party
Provides reporting and logging functions to detect communication errors
3rd Party Integration Capabilities (Content, Training)
Provides adapter or mechanism to communicate with external systems that provide additional content such as catalog information
Provides reporting and logging functions to detect communication errors

Fig. 26D

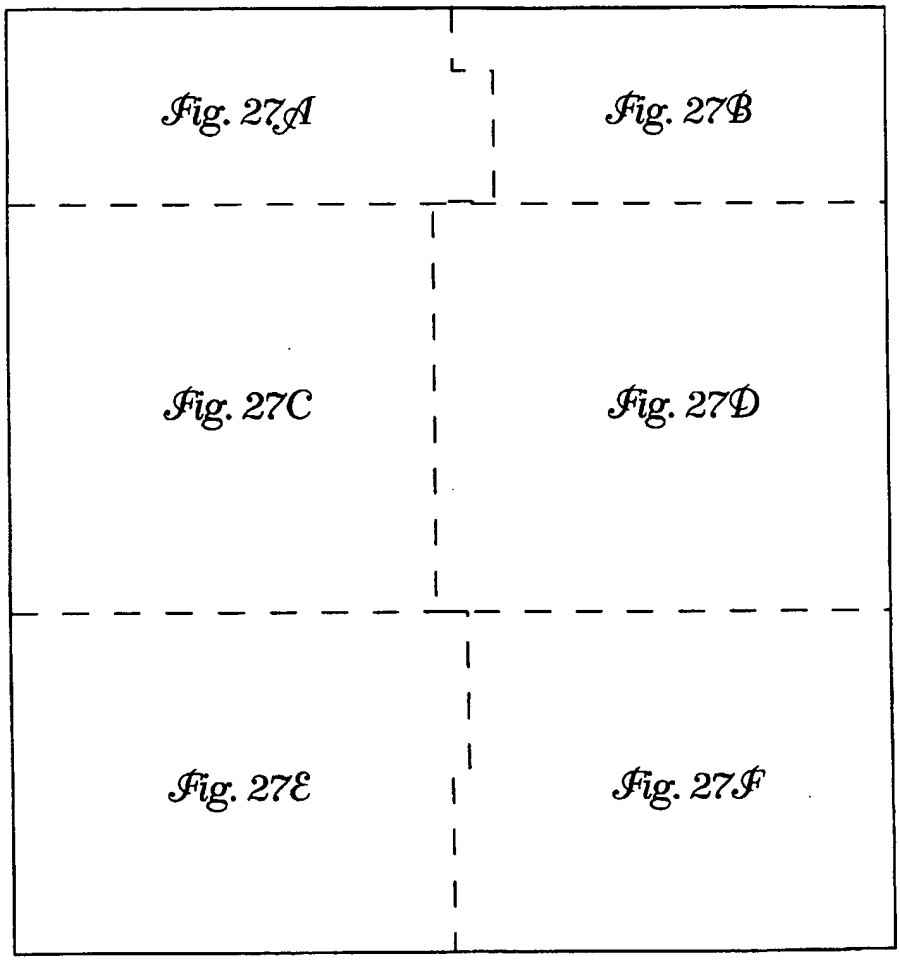
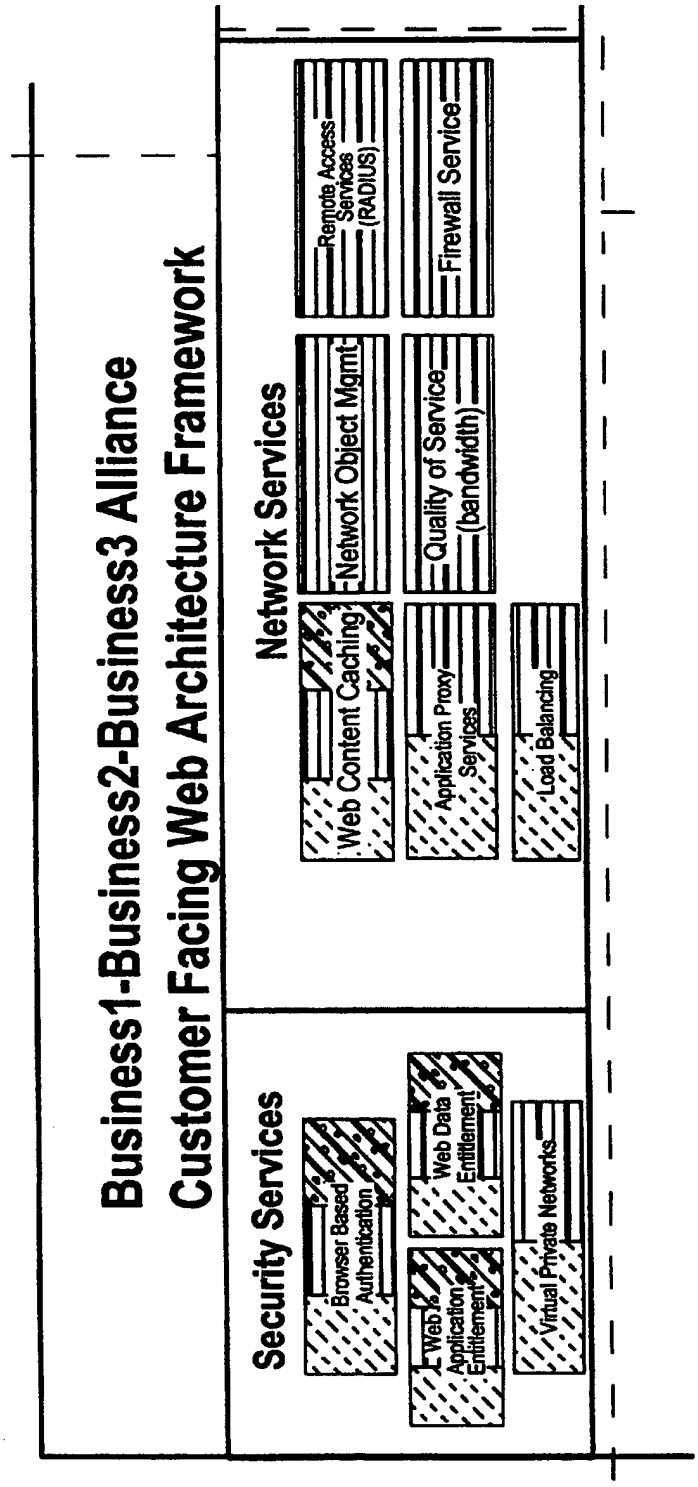


Fig. 27


Business1-Business2-Business3 Alliance
Customer Facing Web Architecture Framework
Security Services
Browser Based Authentication
Web Application Entitlement
Web Data Entitlement
Virtual Private Networks
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Network Object Mgmt
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Quality of Service (bandwidth)
Load Balancing
Remote Access Services (RADIUS)
Firewall Service

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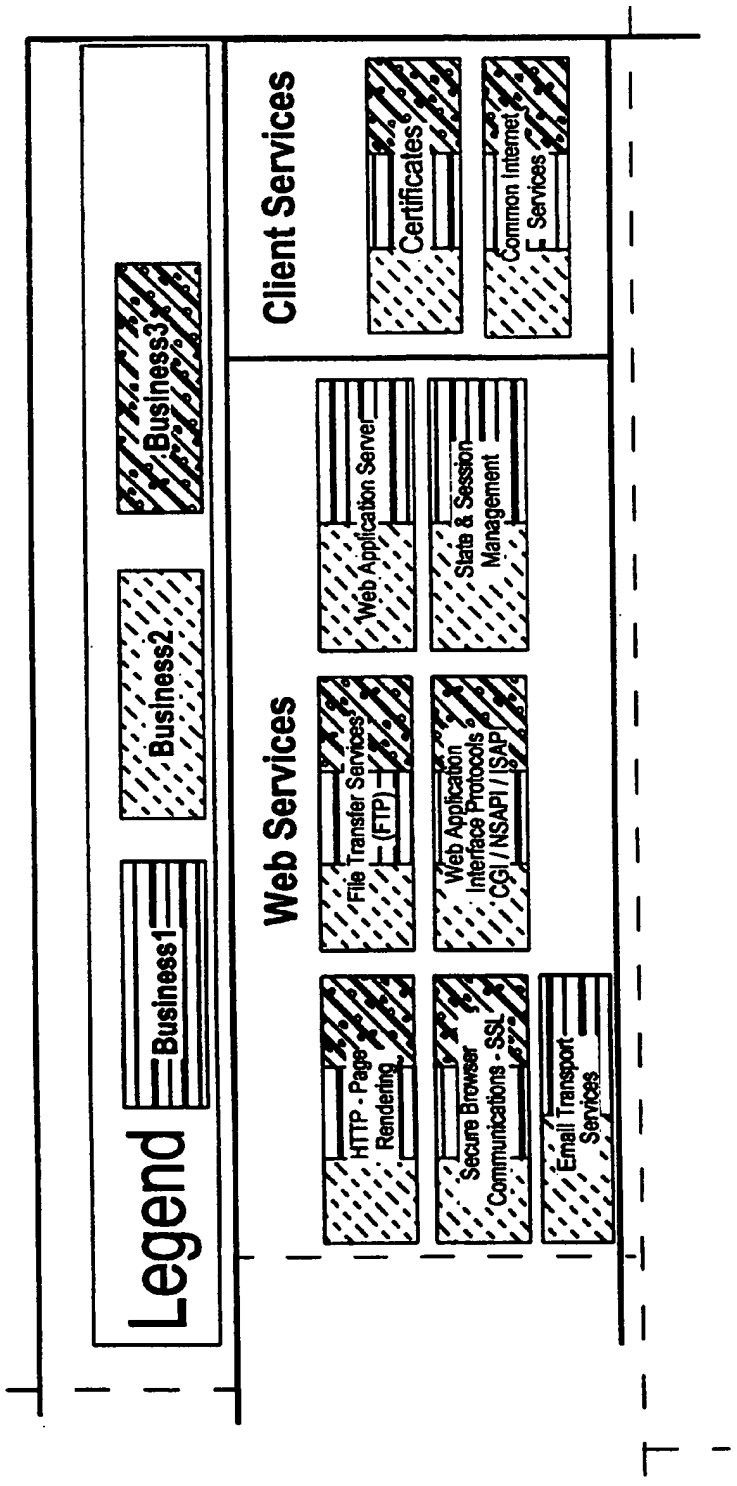
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Business2
Business3
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Common Internet Services
Web Services
Web Application Server
State & Session Management
File Transfer Services (FTP)
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Secure Browser Communications - SSL
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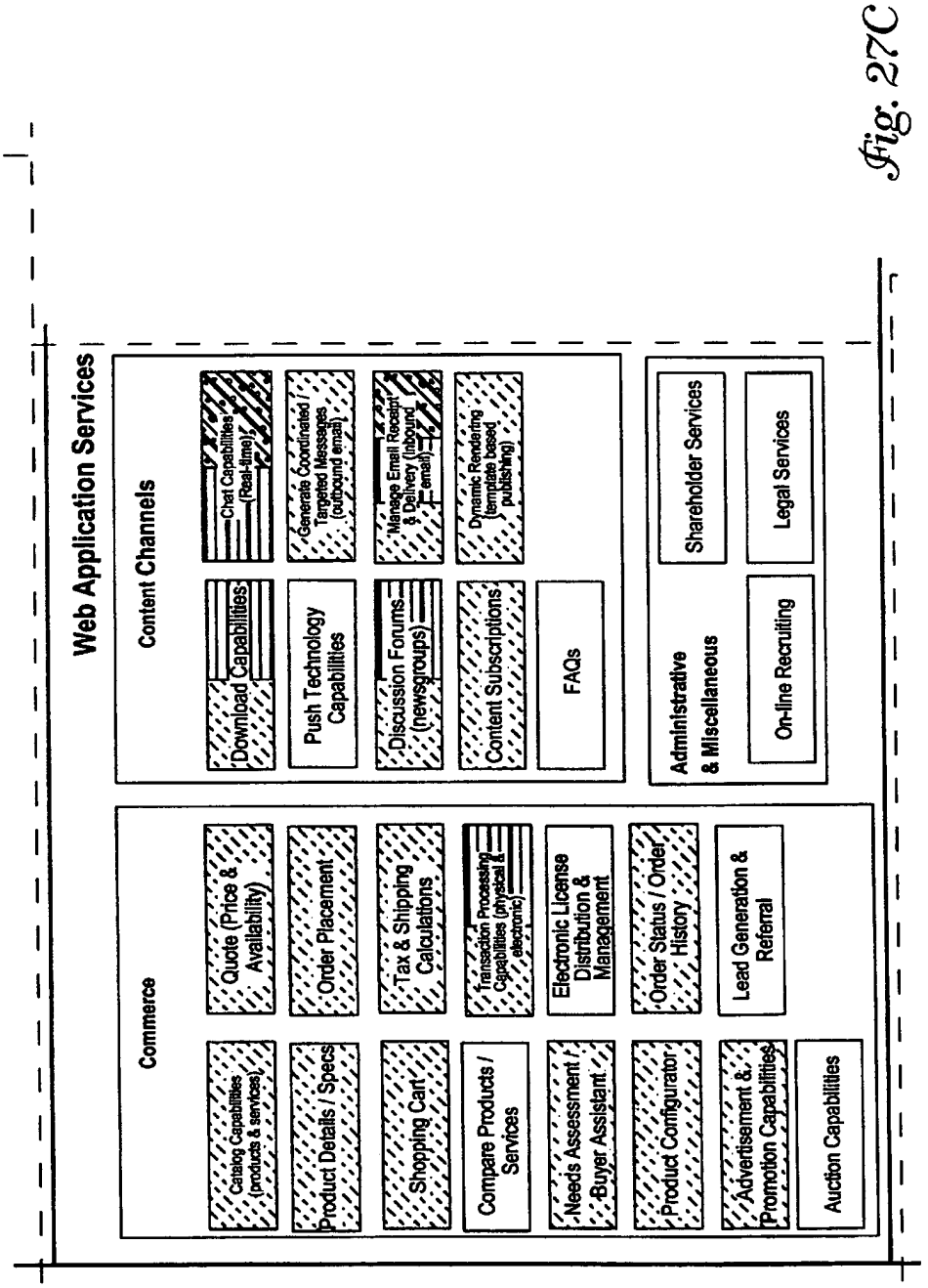
Fig. 27B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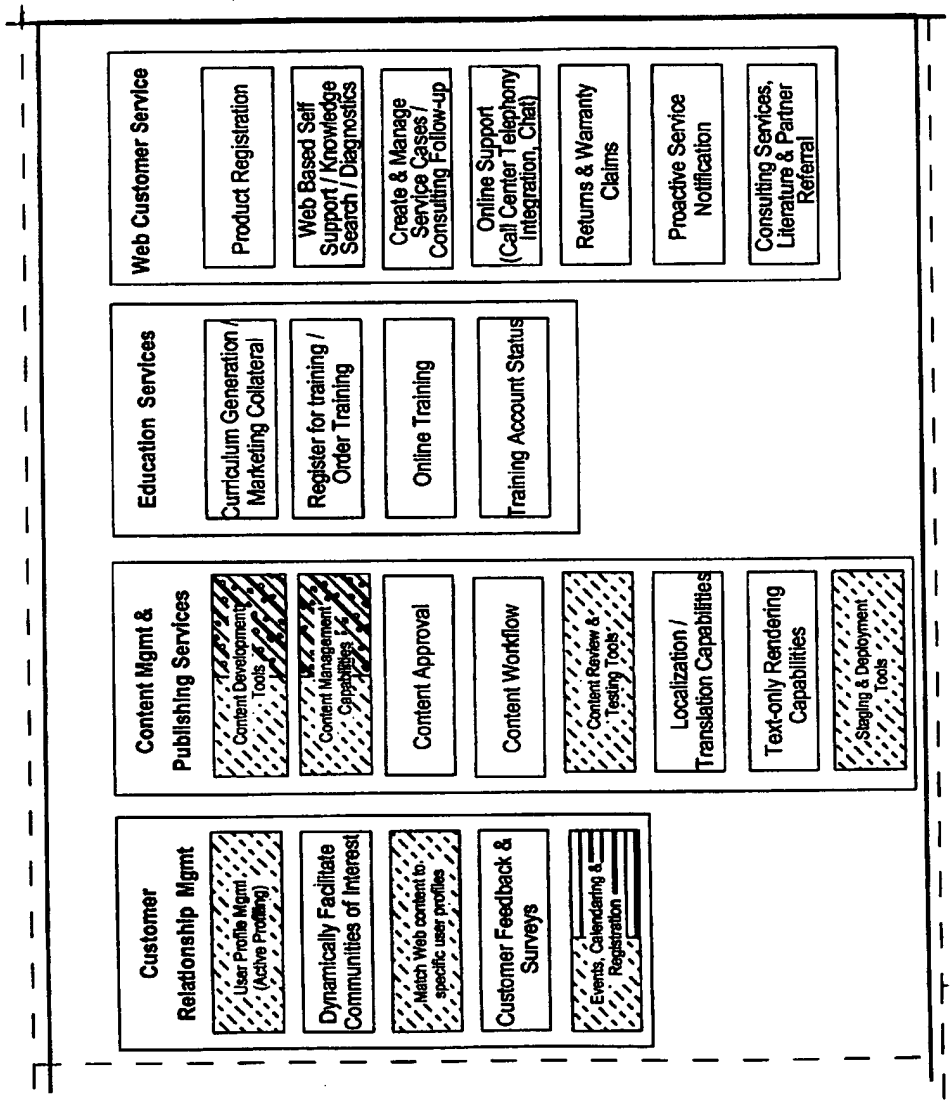
Shareholder Services
On-line Recruiting
Legal Services

Fig. 27C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Consulting Services, Literature & Partner Referral
Education Services
Curriculum Generation / Marketing Collateral
Register for training / Order Training
Online Training
Training Account Status
Content Mgmt & Publishing Services
Content Development Tools
Content Management Capabilities
Content Approval
Content Workflow
Content Review & Testing Tools
Localization / Translation Capabilities
Text-only Rendering Capabilities
Staging & Deployment Tools
Customer Relationship Mgmt
User Profile Mgmt. (Active Profiling)
Dynamically Facilitate Communities of Interest
Match Web content to specific user profiles
Customer Feedback & Surveys
Events, Calendaring & Registration

Fig. 27D

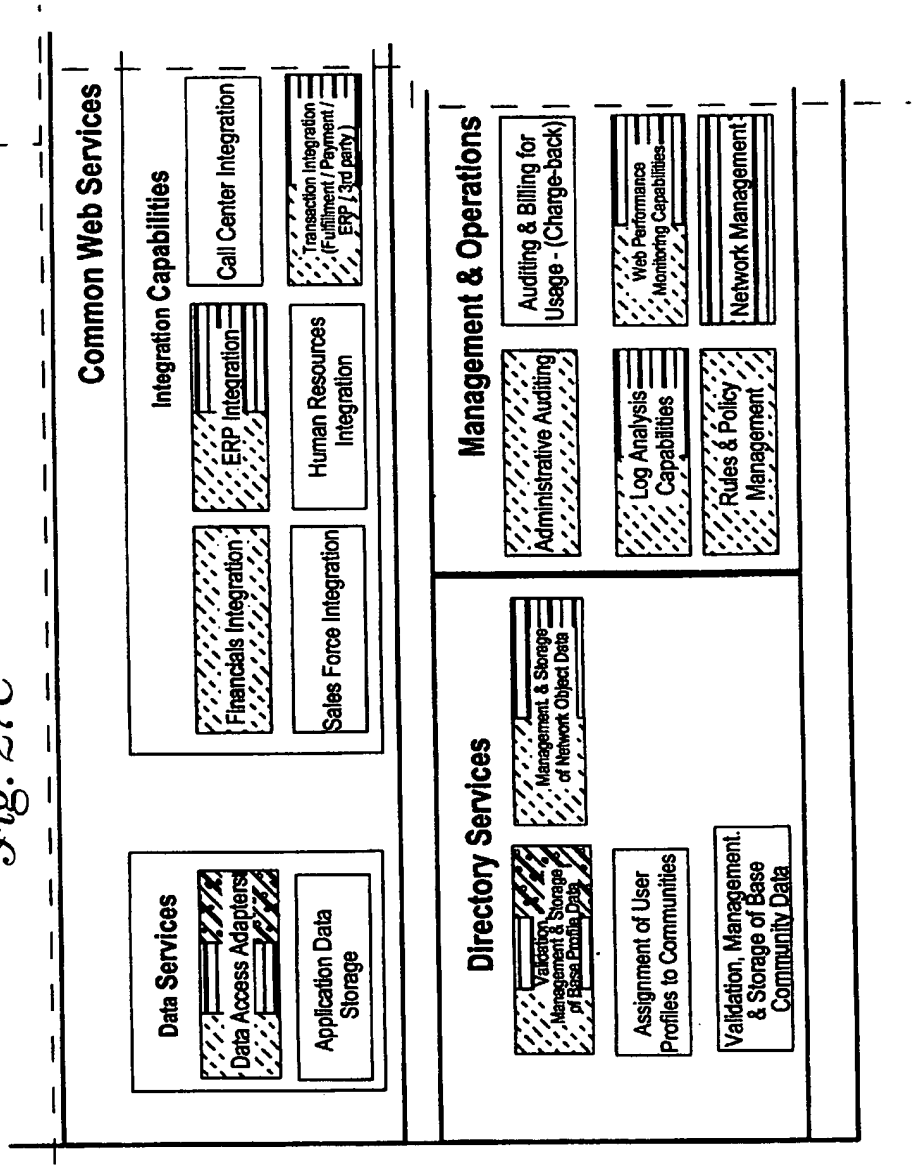

Common Web Services
Data Services
Data Access Adapters
Application Data Storage
Integration Capabilities
Financials Integration
ERP Integration
Call Center Integration
Sales Force Integration
Human Resources Integration
Transaction Integration (Fulfillment / Payment / ERP / 3rd party)
Directory Services
Validation, Management & Storage of Base Profile Data
Management & Storage of Network Object Data
Assignment of User Profiles to Communities
Validation, Management & Storage of Base Community Data
Management & Operations
Auditing & Billing for Usage - (Charge-back)
Administrative Auditing
Web Performance Monitoring Capabilities
Log Analysis Capabilities
Network Management
Rules & Policy Management

Fig. 27E

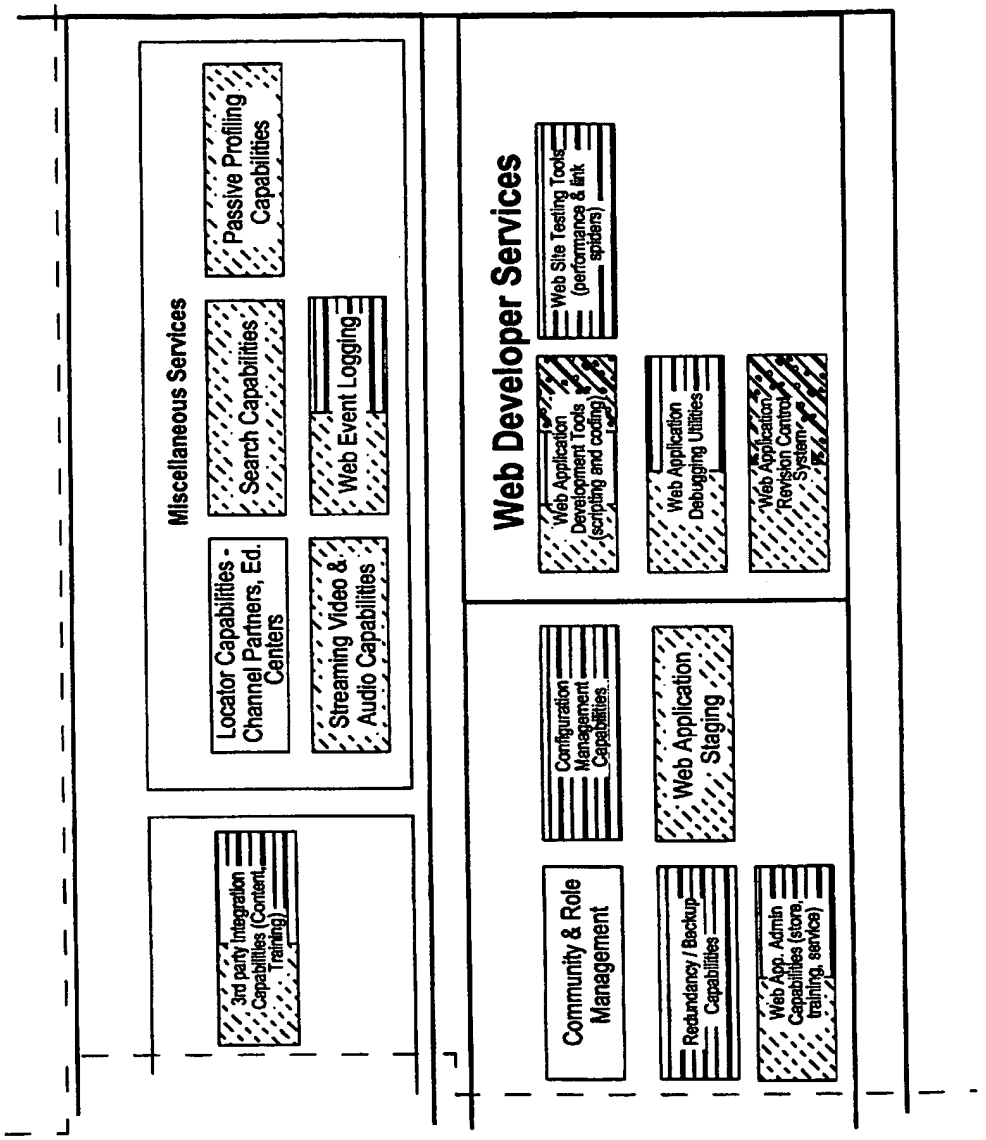

Miscellaneous Services
Passive Profiling Capabilities
Search Capabilities
Web Event Logging
Locator Capabilities - Channel Partners, Ed. Centers
Streaming Video & Audio Capabilities
3rd party Integration Capabilities (Content, Training)
Web Developer Services
Web Site Testing Tools (performance & link spiders)
Web Application Development Tools (scripting and coding)
Web Application Debugging Utilities
Web Application Revision Control System
Configuration Management Capabilities
Web Application Staging
Community & Role Management
Redundancy / Backup Capabilities
Web App. Admin Capabilities (store, training, service)

Fig. 27F

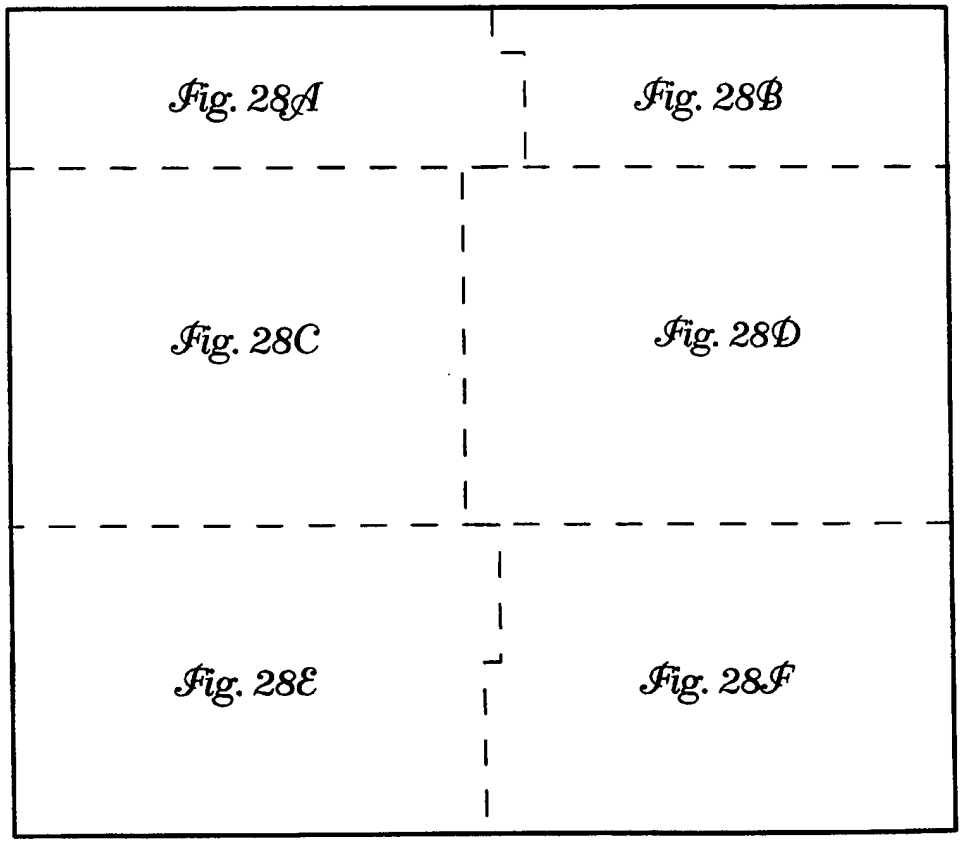


Fig. 28

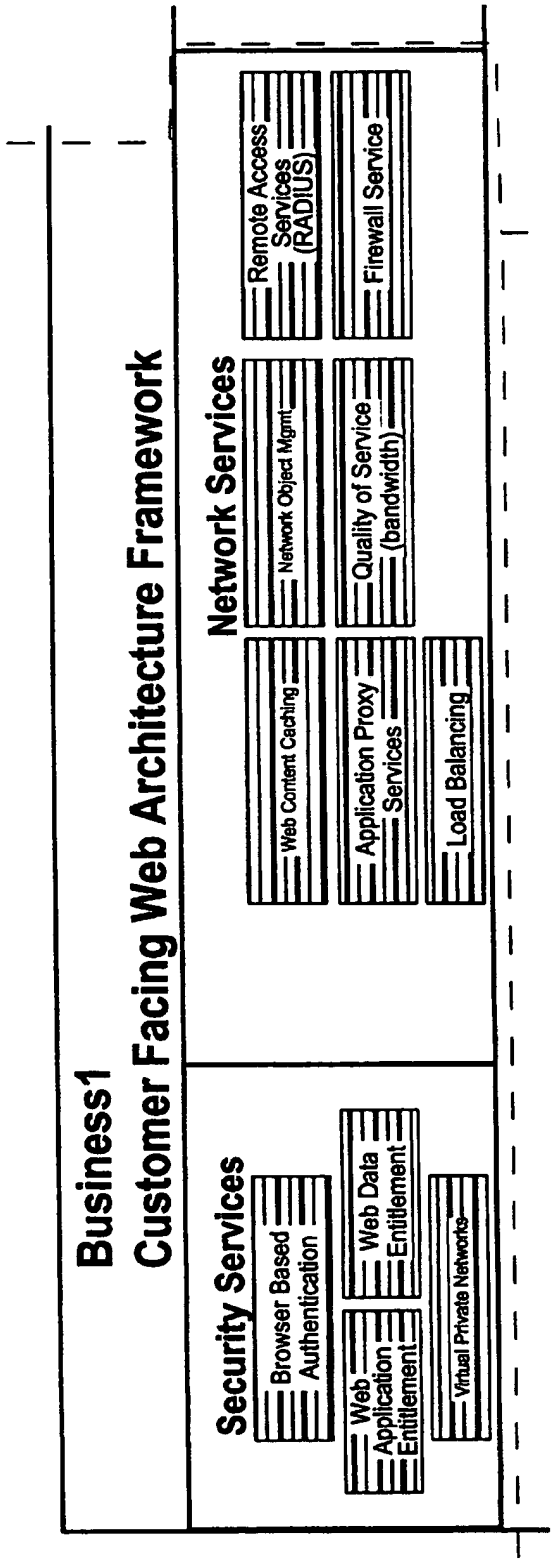

Business1
Customer Facing Web Architecture Framework
Network Services
Remote Access Services (RADIUS)
Firewall Service
Network Object Mgmt
Quality of Service (bandwidth)
Web Content Caching
Application Proxy Services
Load Balancing
Security Services
Browser Based Authentication
Web Data Entitlement
Web Application Entitlement
Virtual Private Networks

Fig. 28A

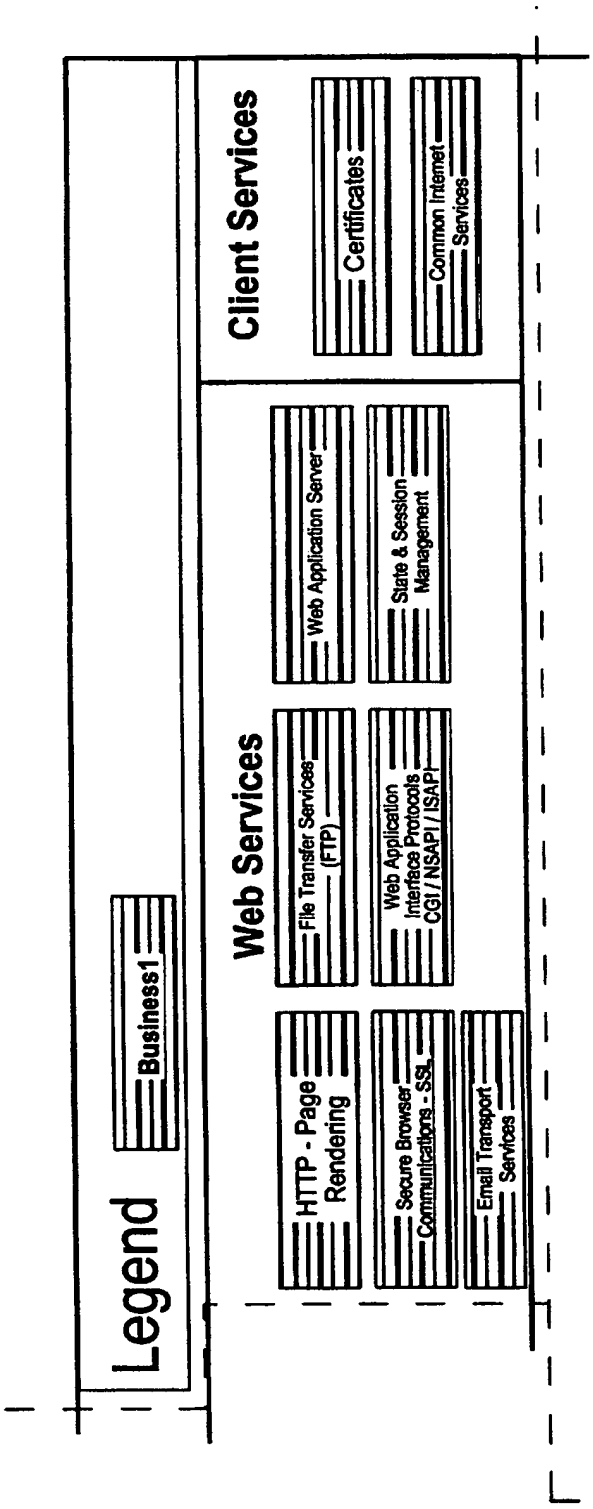
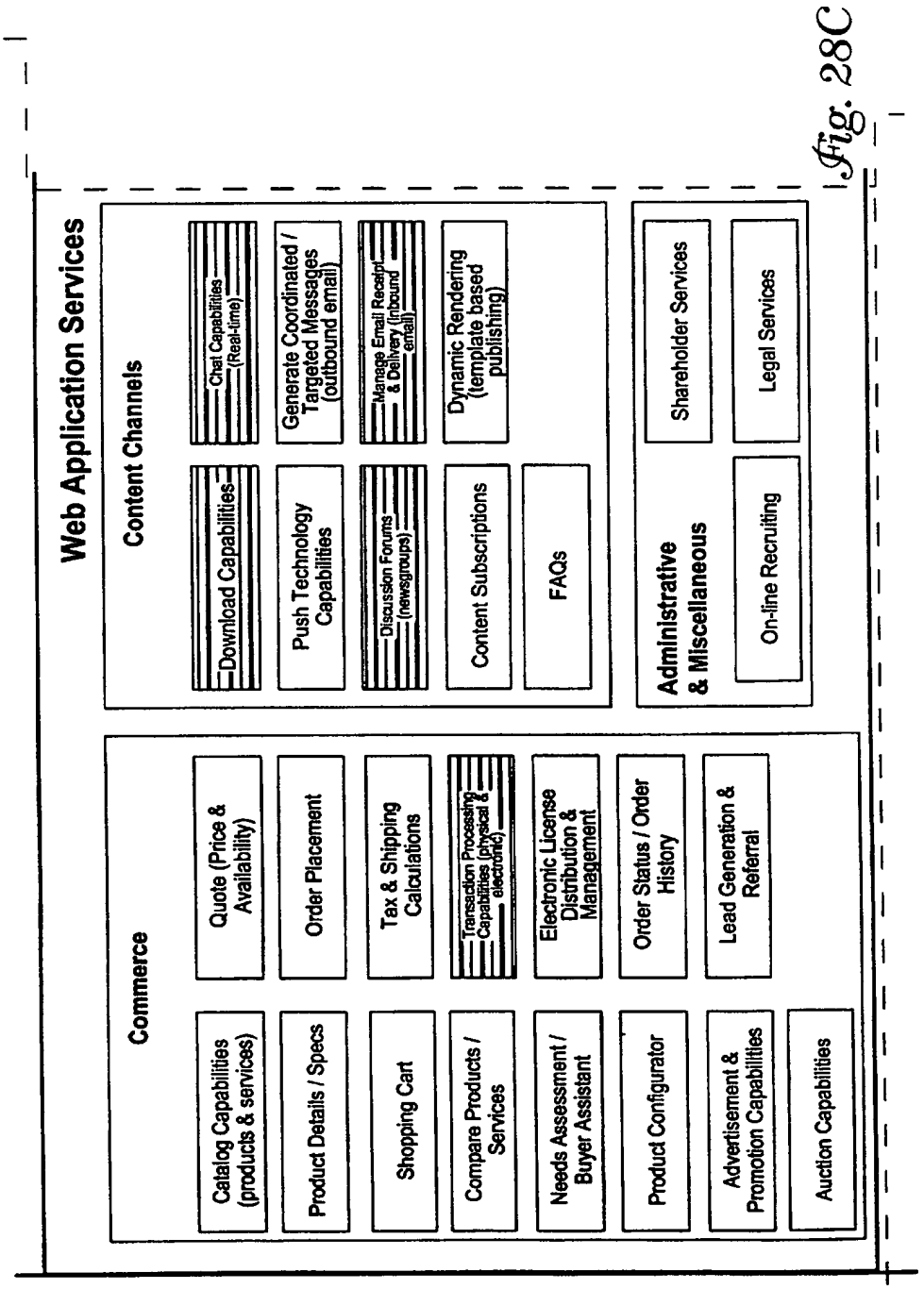

Legend
Business1
Web Services
File Transfer Services (FTP)
Web Application Interface Protocols CGI / NSAPI / ISAPI
HTTP - Page Rendering
Secure Browser Communications - SSL
Email Transport Services
Web Application Server
State & Session Management
Client Services
Certificates
Common Internet Services

Fig. 28B


Web Application Services
Commerce
Catalog Capabilities (products & services)
Product Details / Specs
Shopping Cart
Compare Products / Services
Needs Assessment / Buyer Assistant
Product Configurator
Advertisement & Promotion Capabilities
Auction Capabilities
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Transaction Processing Capabilities (physical & electronic)
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Content Channels
Download Capabilities
Chat Capabilities (Real-time)
Push Technology Capabilities
Generate Coordinated / Targeted Messages (outbound email)
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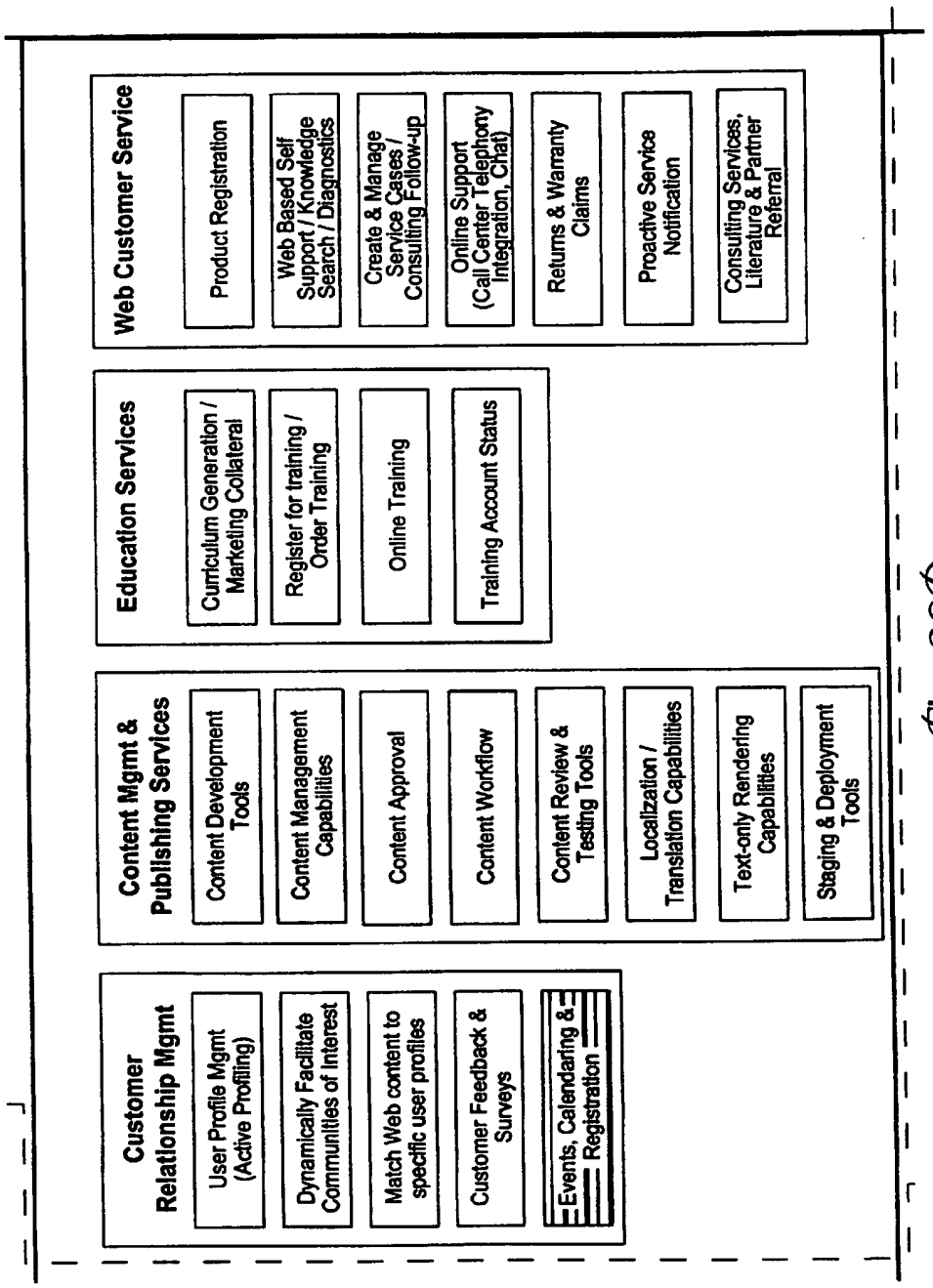
Manage Email Receipt & Delivery (inbound email)
Content Subscriptions
Dynamic Rendering (template based publishing)
FAQs
Administrative & Miscellaneous
On-line Recruiting
Shareholder Services
Legal Services

Fig. 28C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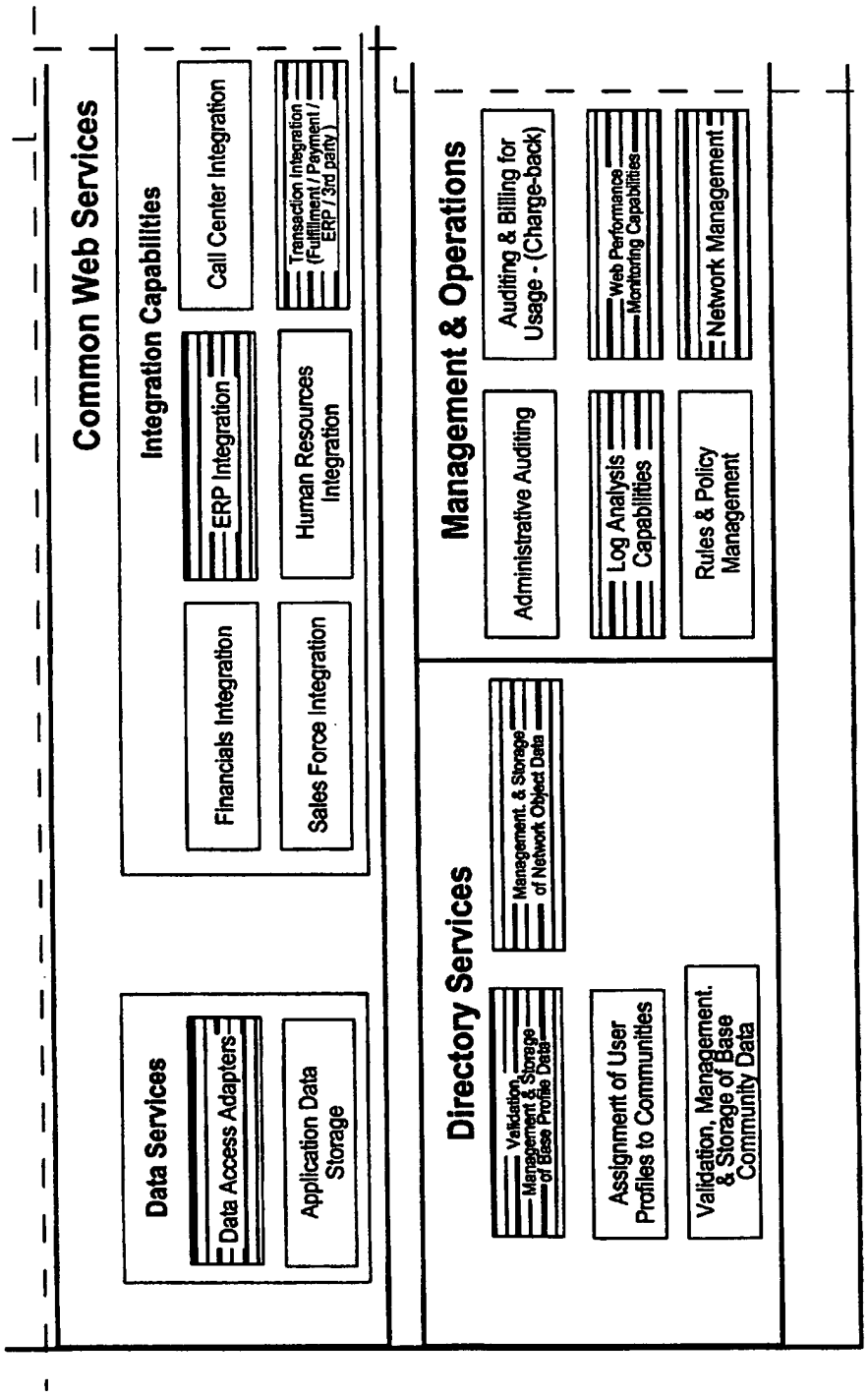
Returns & Warranty Claims
Proactive Service Notification
Consulting Services, Literature & Partner Referral

Fig. 28D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Sales Force Integration
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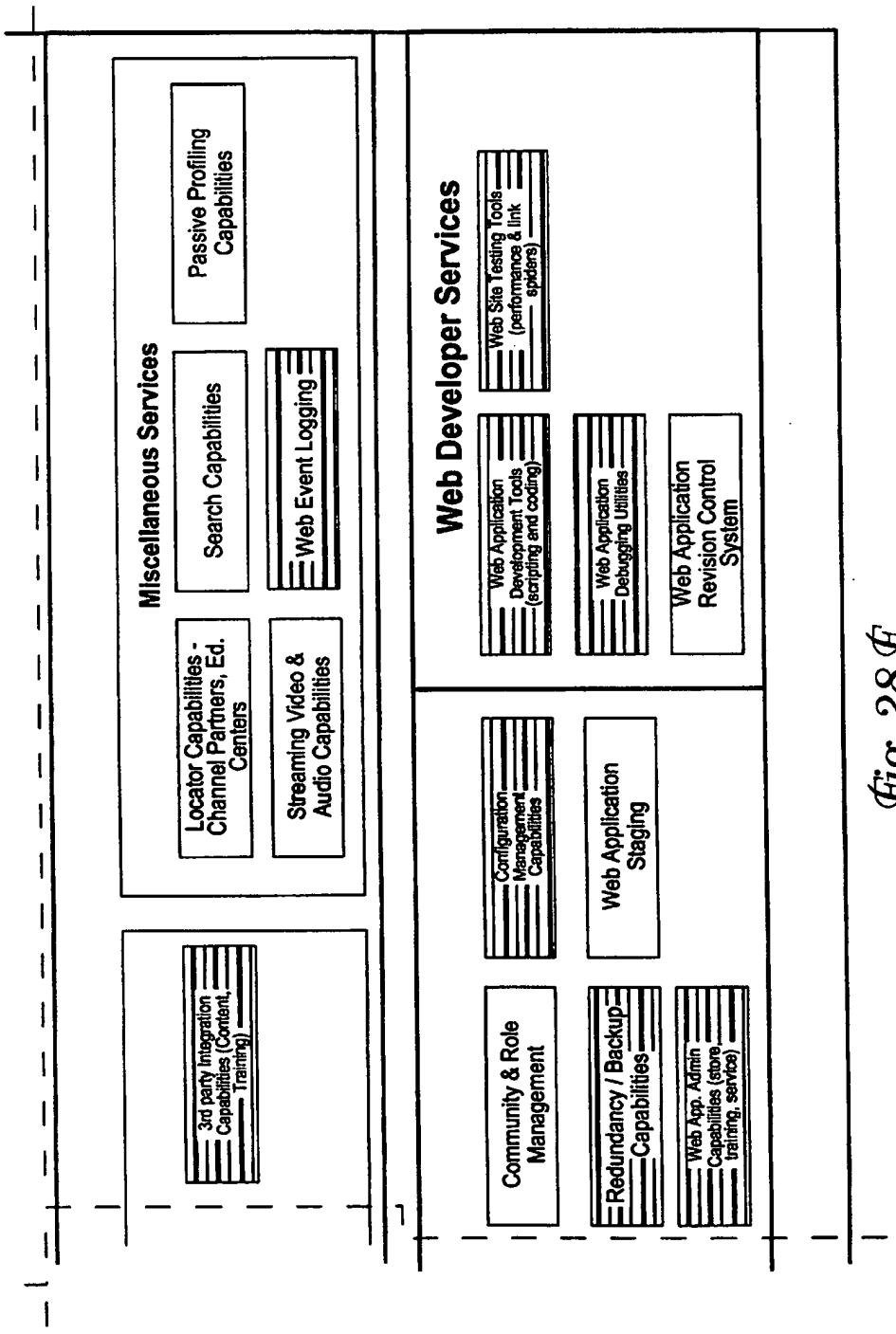
Administrative Auditing
Log Analysis Capabilities
Rules & Policy Management
Directory Services
Management & Storage of Network Object Data
Validation Management & Storage of Base Profile Data
Assignment of User Profiles to Communities
Validation, Management & Storage of Base Community Data

Fig. 28C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Configuration Management Capabilities
Web Application Staging
Community & Role Management
Redundancy / Backup Capabilities
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Fig. 28F

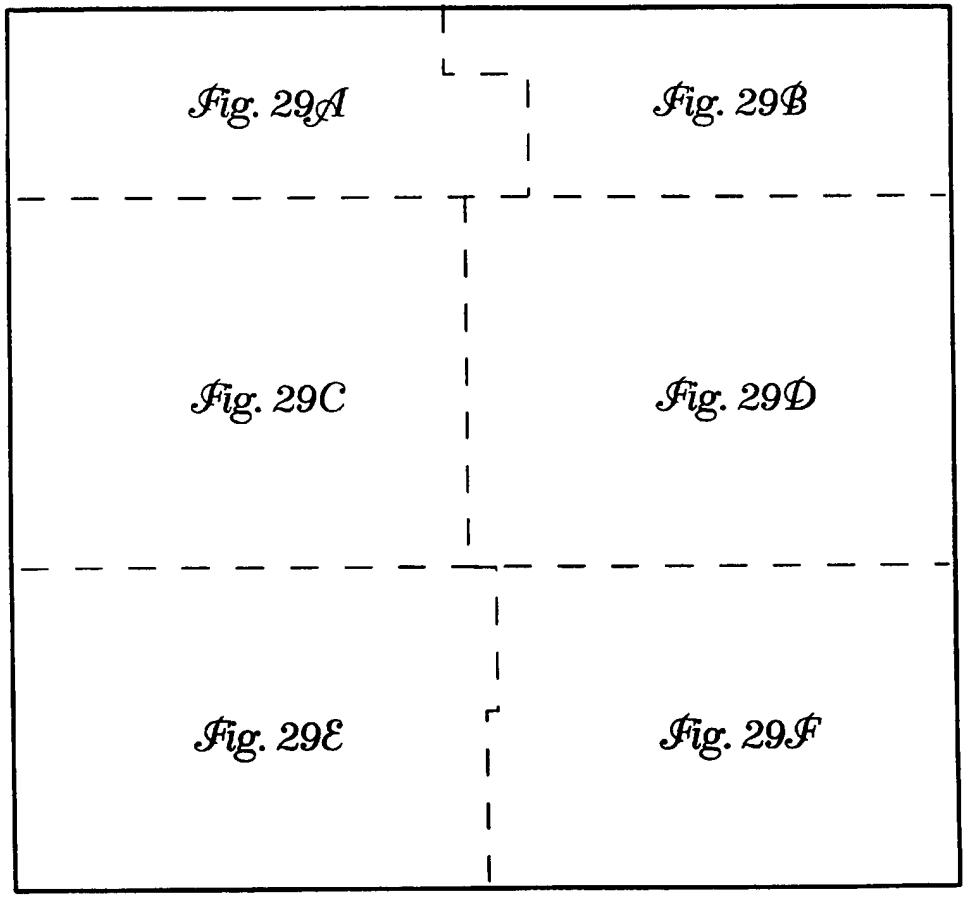
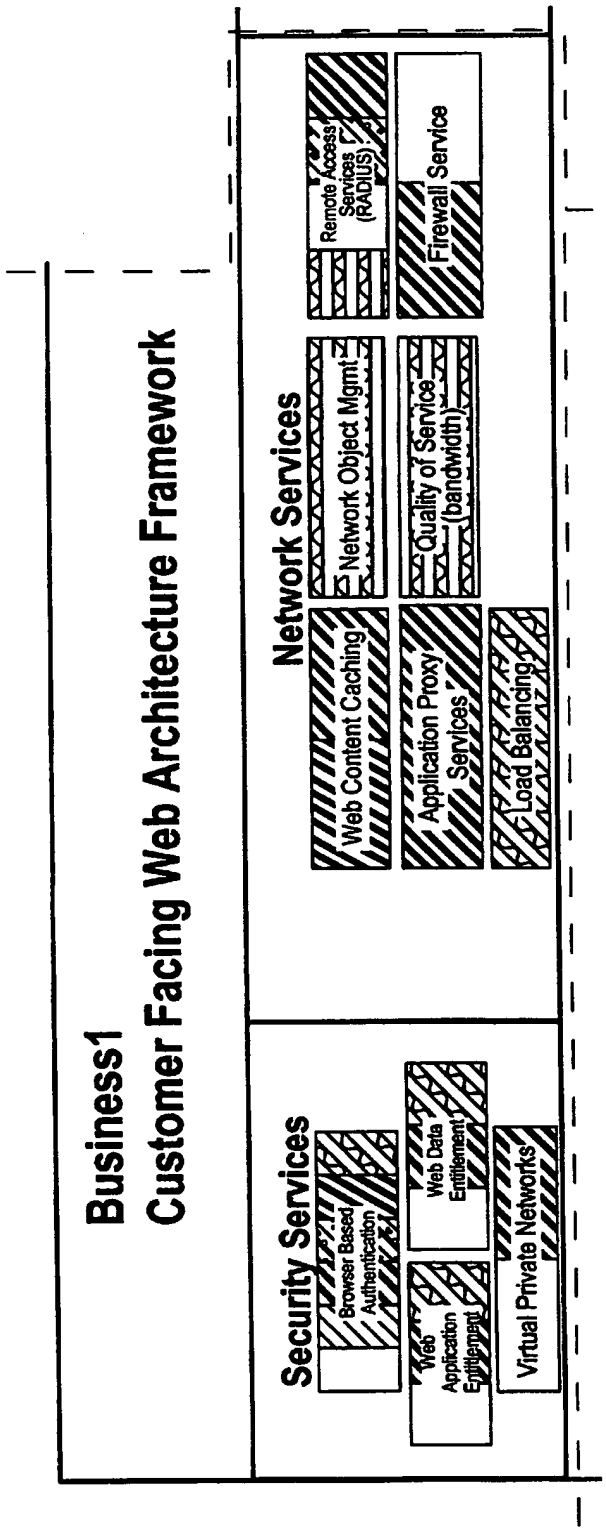


Fig. 29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Load Balancing
Security Services
Browser Based Authentication
Web Data Entitlement
Web Application Entitlement
Virtual Private Networks

Fig. 29A

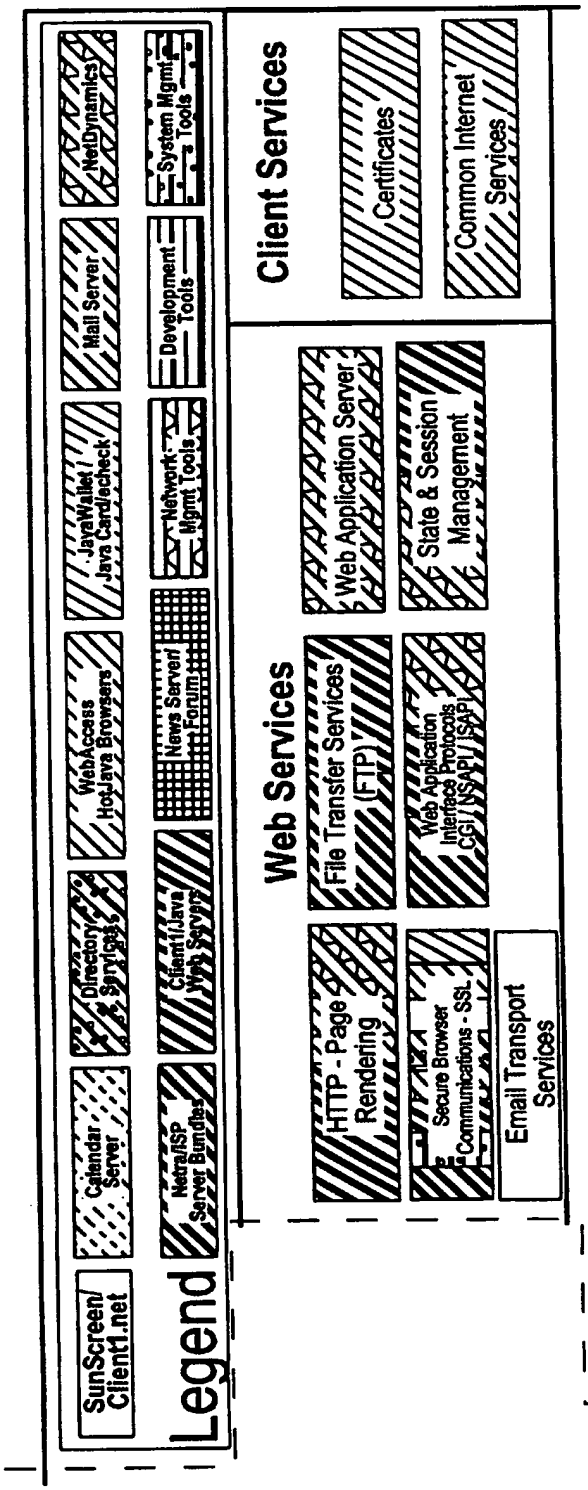
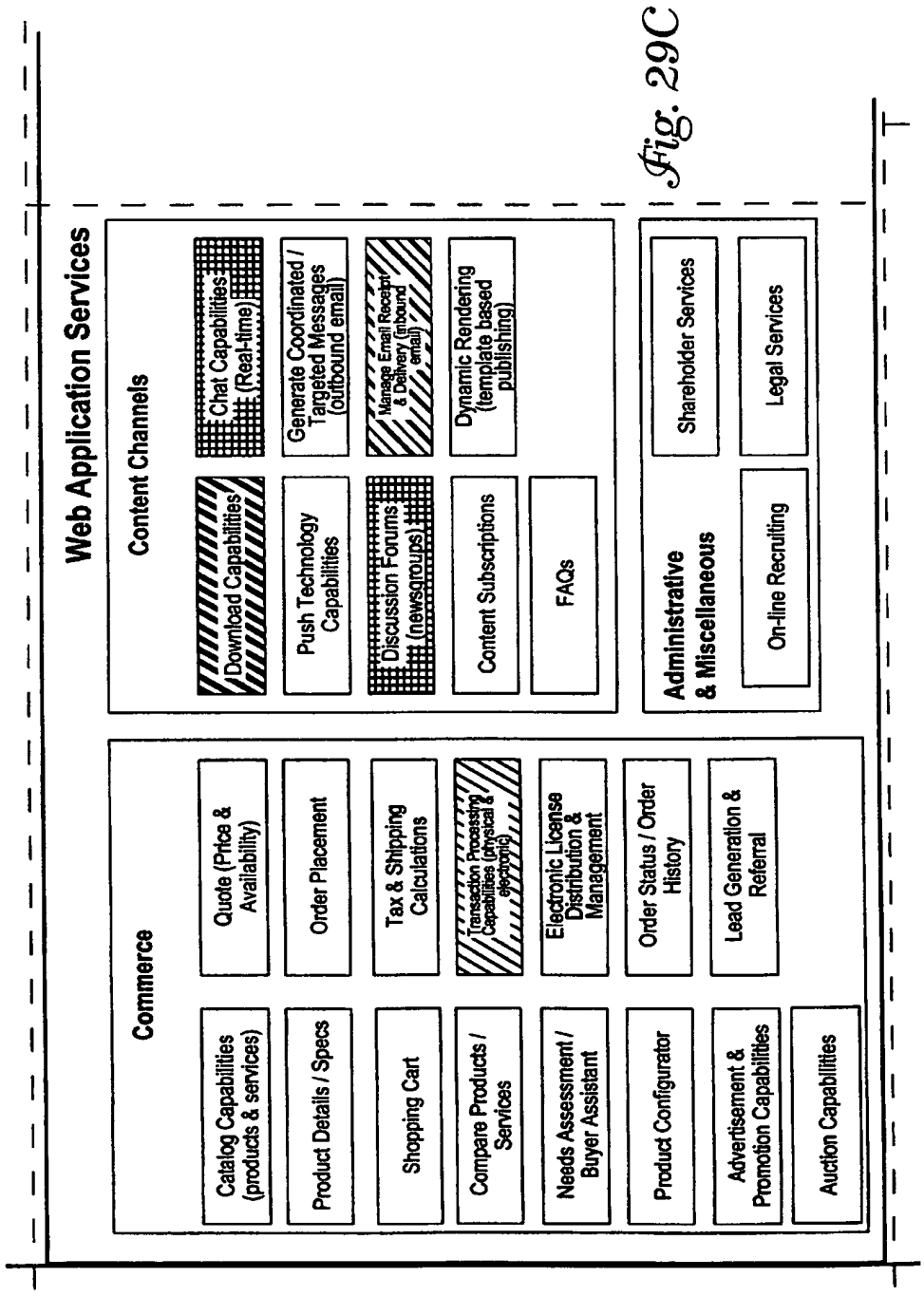

Client Services
Certificates
Common Internet Services
Web Services
Web Application Server
State & Session Management
File Transfer Services (FTP)
Web Application Interface Protocols CGI (NSAPI, ISAPI)
HTTP - Page Rendering
Secure Browser Communications - SSL
Email Transport Services
Legend
SunScreen/ Client1.net
Calendar Server
Directory Services
Client1/Java Web Server
NetraISP Server Bundles
WebAccess HotJava Browsers
News Server/ Internet Forum
JavaWallet/ Java Card/echeck
Network Mgmt Tools
Development Tools
Mail Server
System Mgmt Tools
NetDynamics

Fig. 29B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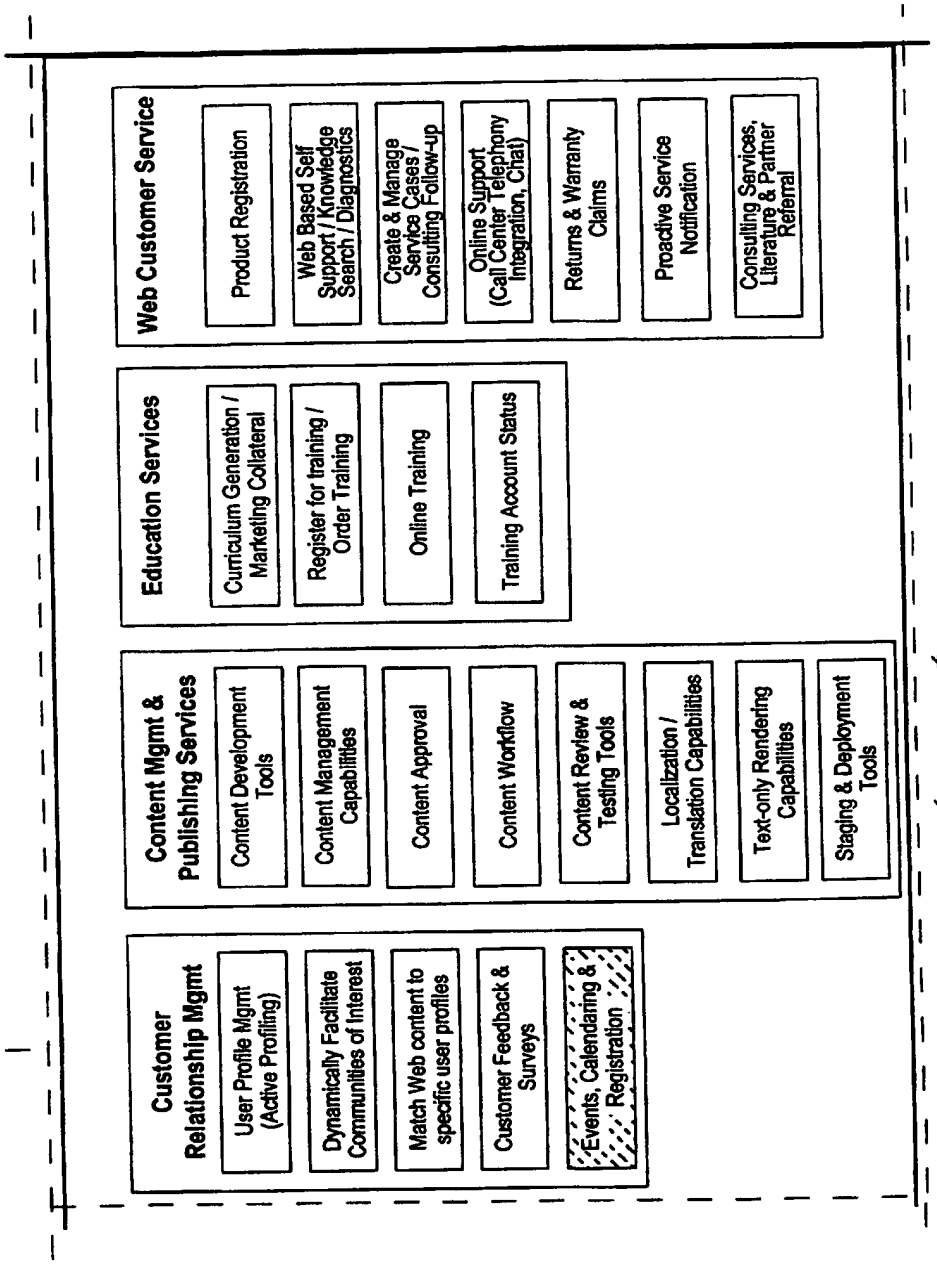
Manage Email Receipt & Delivery (inbound email)
Dynamic Rendering (template based publishing)
Administrative & Miscellaneous
On-line Recruiting
Shareholder Services
Legal Services

Fig. 29C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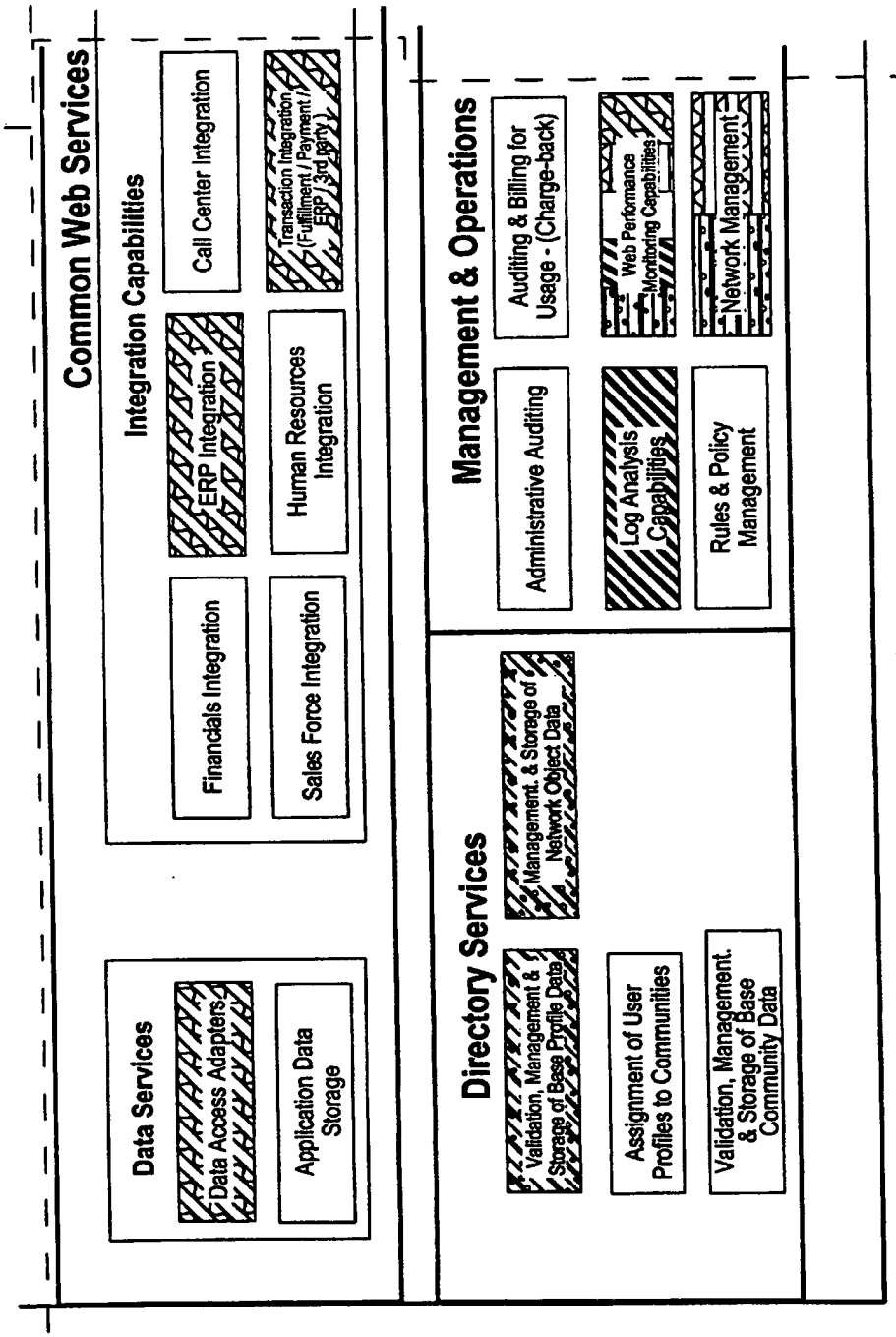
Online Support (Call Center Telephony Integration, Chat)
Returns & Warranty Claims
Proactive Service Notification
Consulting Services, Literature & Partner Referral

Fig. 29D


Common Web Services
Integration Capabilities
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Financials Integration
ERP Integration
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Log Analysis Capabilities
Network Management
Rules & Policy Management
Directory Services
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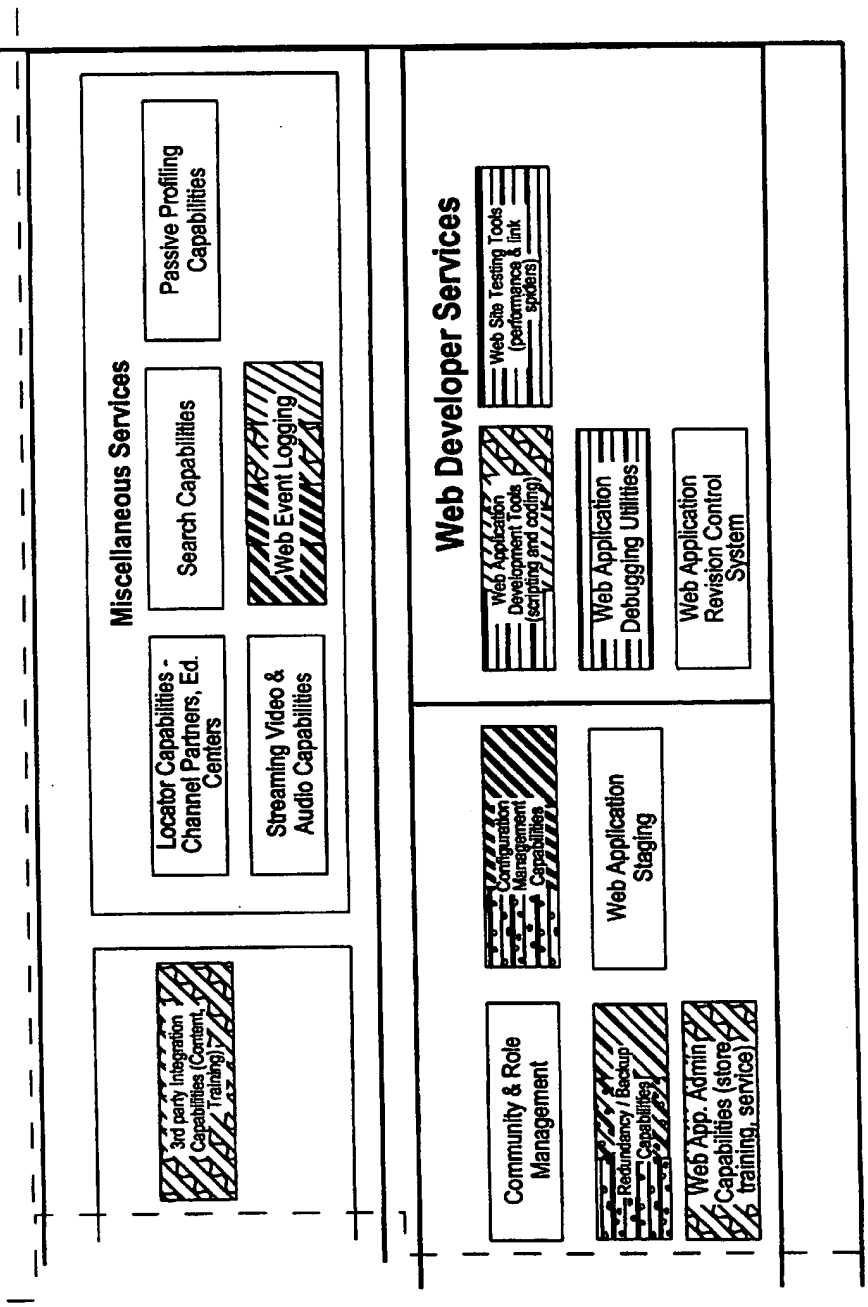
Management & Storage of Network Object Data
Assignment of User Profiles to Communities
Validation, Management & Storage of Base Community Data

Fig. 29C


Miscellaneous Services
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Web Application Debugging Utilities
Web Application Revision Control System
Configuration Management Capabilities
Web Application Staging
Community & Role Management
Redundancy / Backup Capabilities
Web App. Admin Capabilities (store training, service)

Fig. 29F

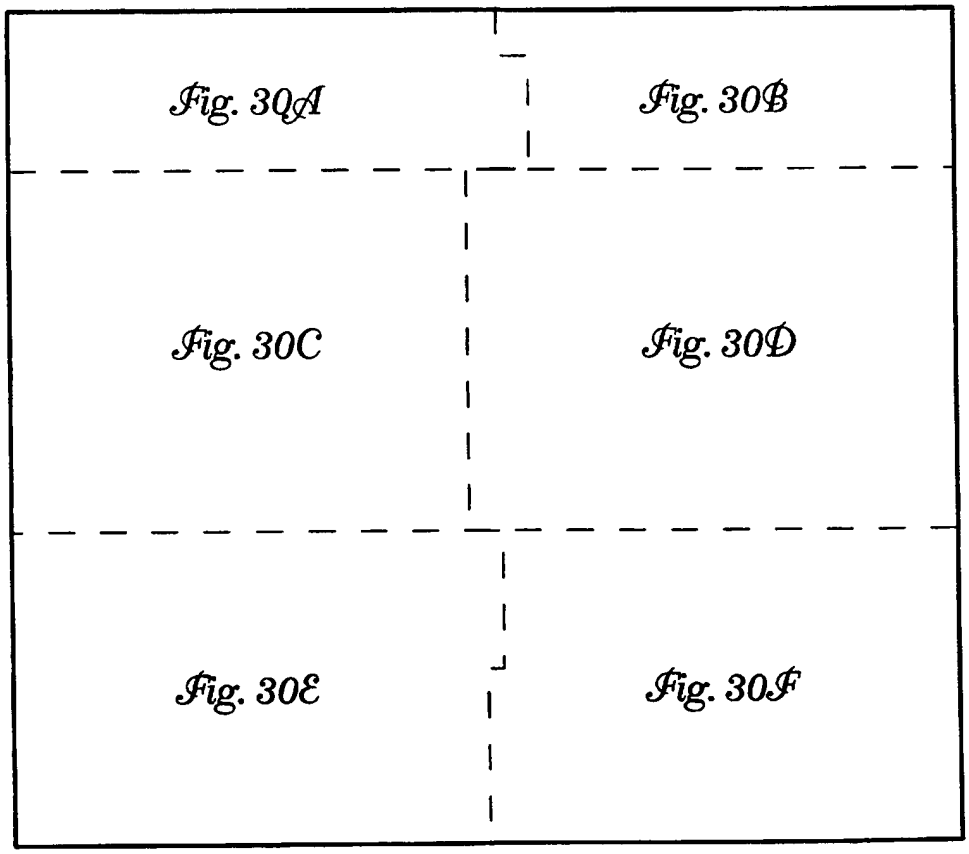


Fig. 30

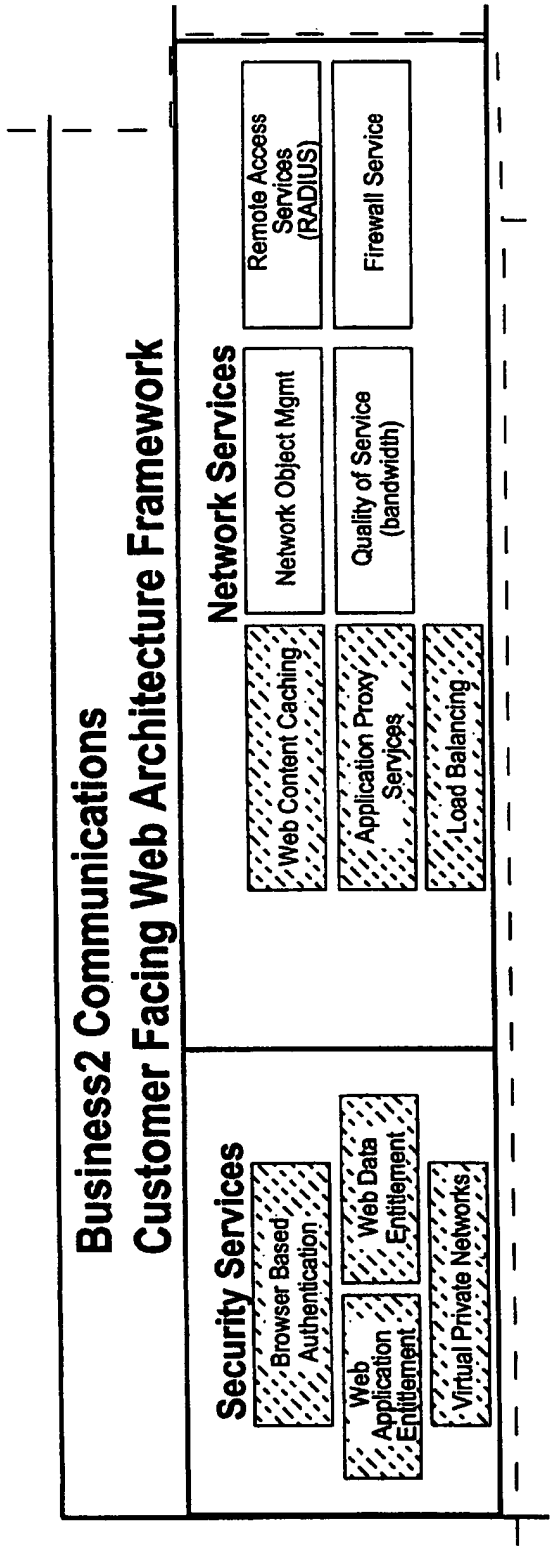

Business2 Communications
Customer Facing Web Architecture Framework
Security Services
Browser Based Authentication
Web Application Entitlement
Web Data Entitlement
Virtual Private Networks
Network Services
Web Content Caching
Application Proxy Services
Load Balancing
Network Object Mgmt
Quality of Service (bandwidth)
Remote Access Services (RADIUS)
Firewall Service

Fig. 30A

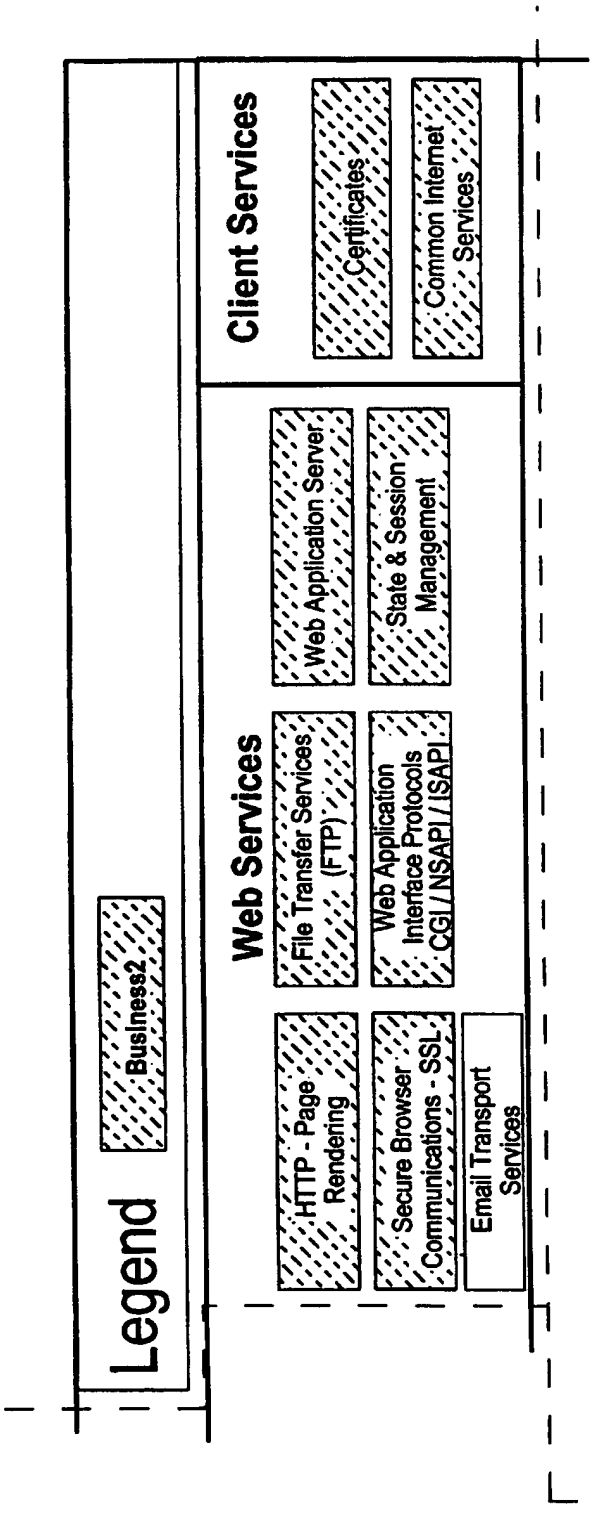
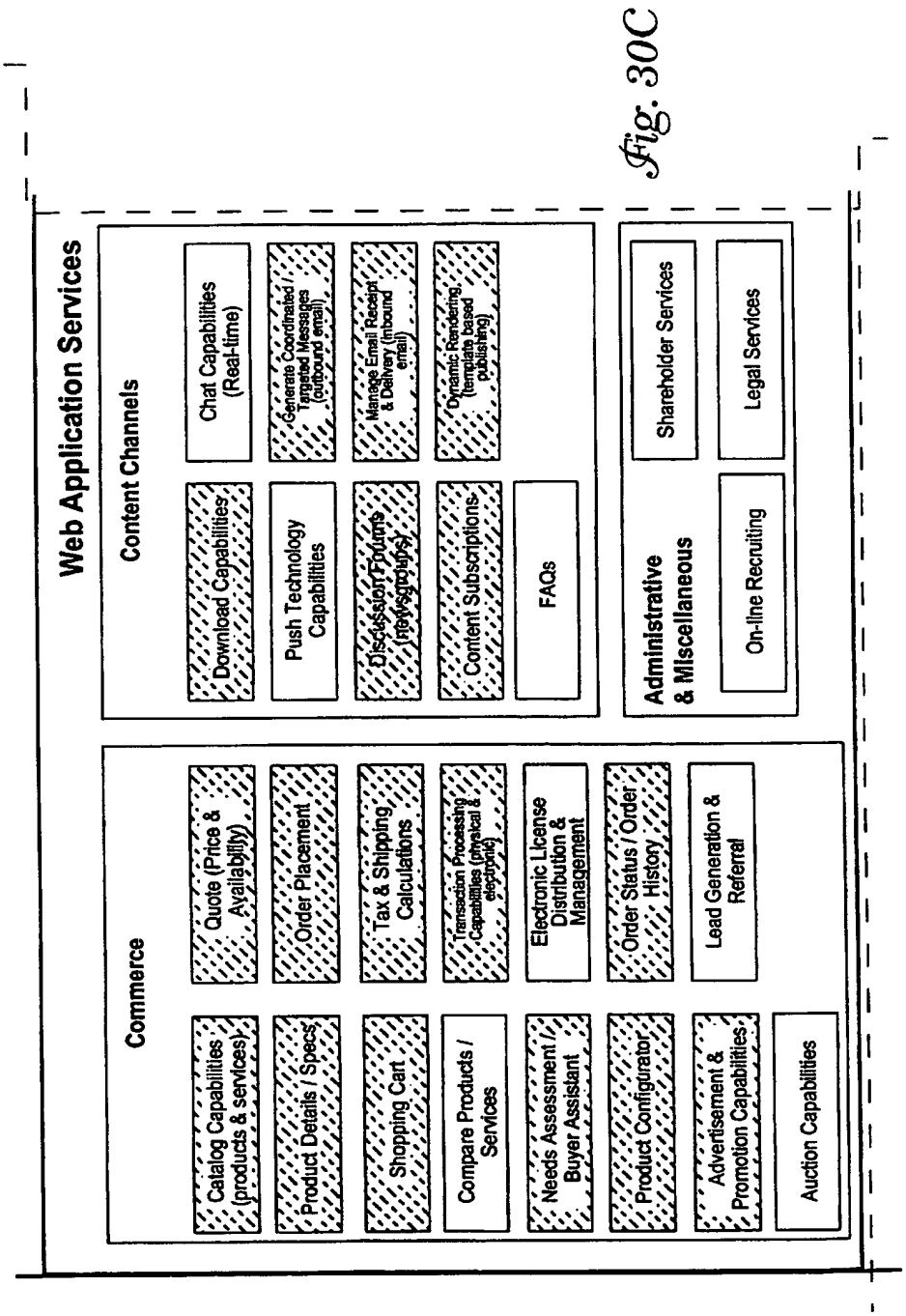

Legend
Business2
Web Services
HTTP - Page Rendering
File Transfer Services (FTP)
Web Application Server
State & Session Management
Secure Browser Communications - SSL
Web Application Interface Protocols CGI / NSAPI / ISAPI
Email Transport Services
Client Services
Certificates
Common Internet Services

Fig. 30B


Web Application Services
Commerce
Catalog Capabilities (products & services)
Quote (Price & Availability)
Product Details / Specs
Order Placement
Shopping Cart
Tax & Shipping Calculations
Compare Products / Services
Transaction Processing Capabilities (physical & electronic)
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Auction Capabilities
Content Channels
Download Capabilities
Chat Capabilities (Real-time)
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Manage Email Receipt & Delivery (inbound email)
Content Subscriptions
Dynamic Rendering, (template based publishing)
FAQs
Administrative & Miscellaneous
Shareholder Services
On-line Recruiting
Legal Services

Fig. 30C

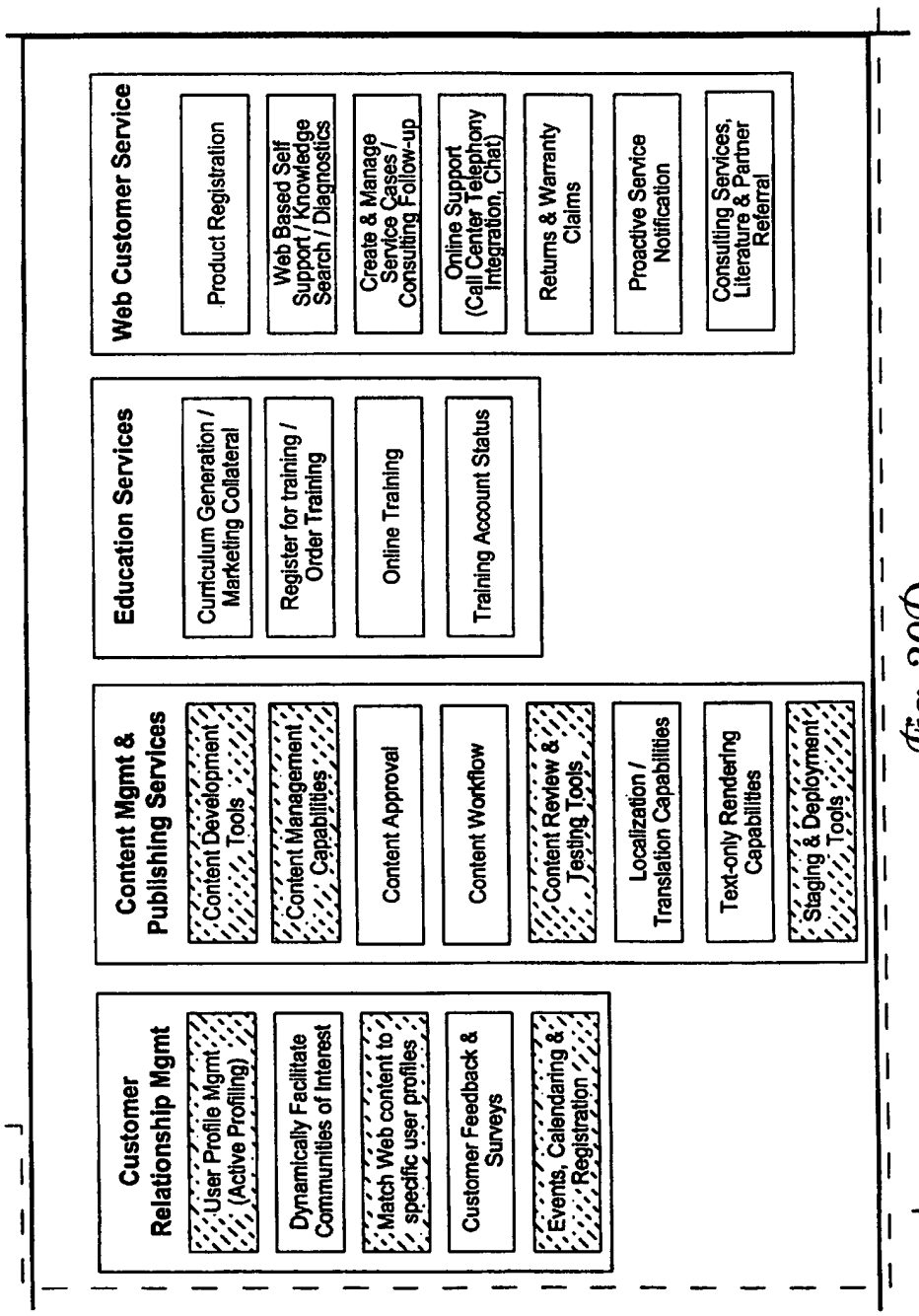
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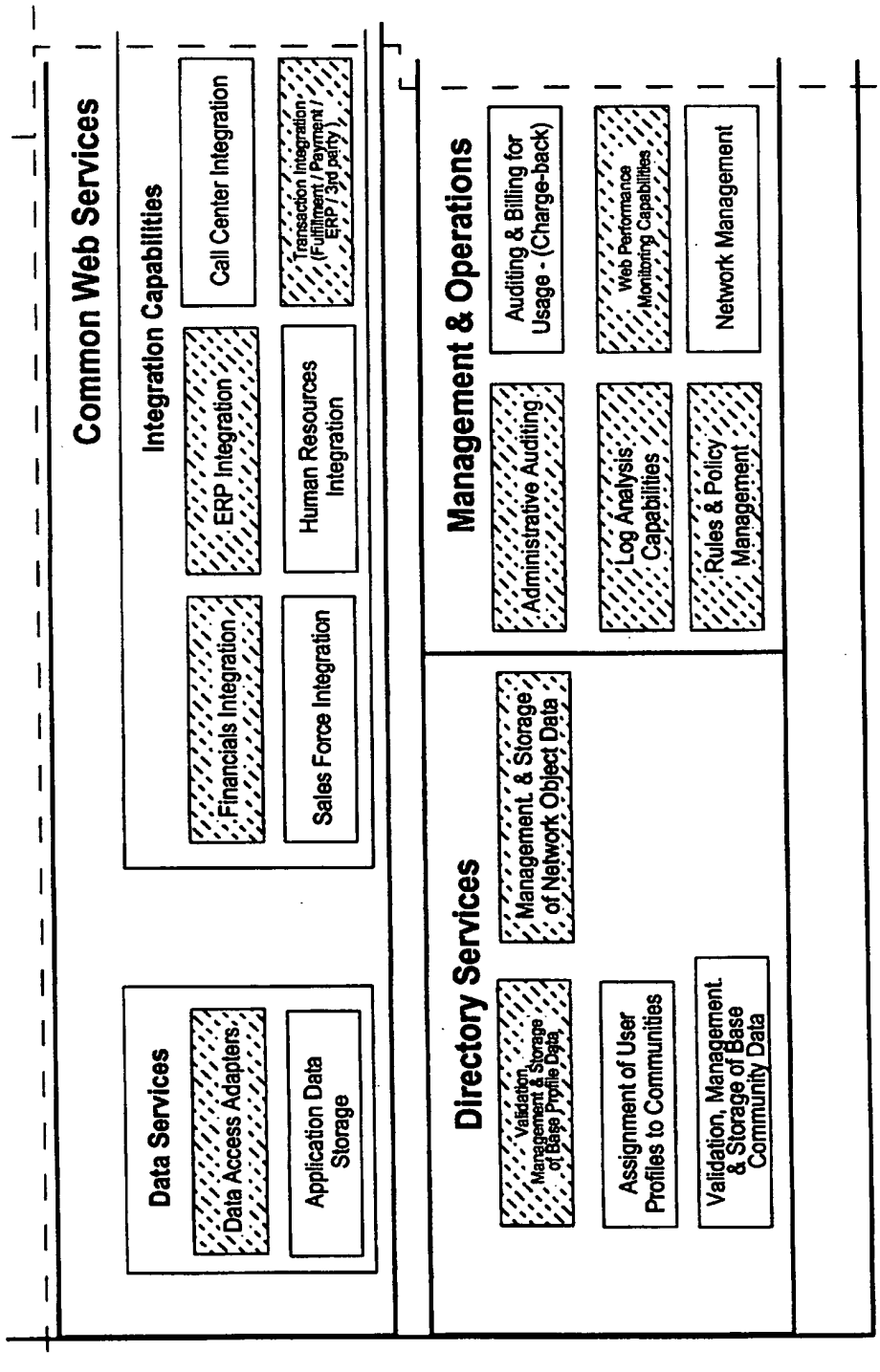
Fig. 30D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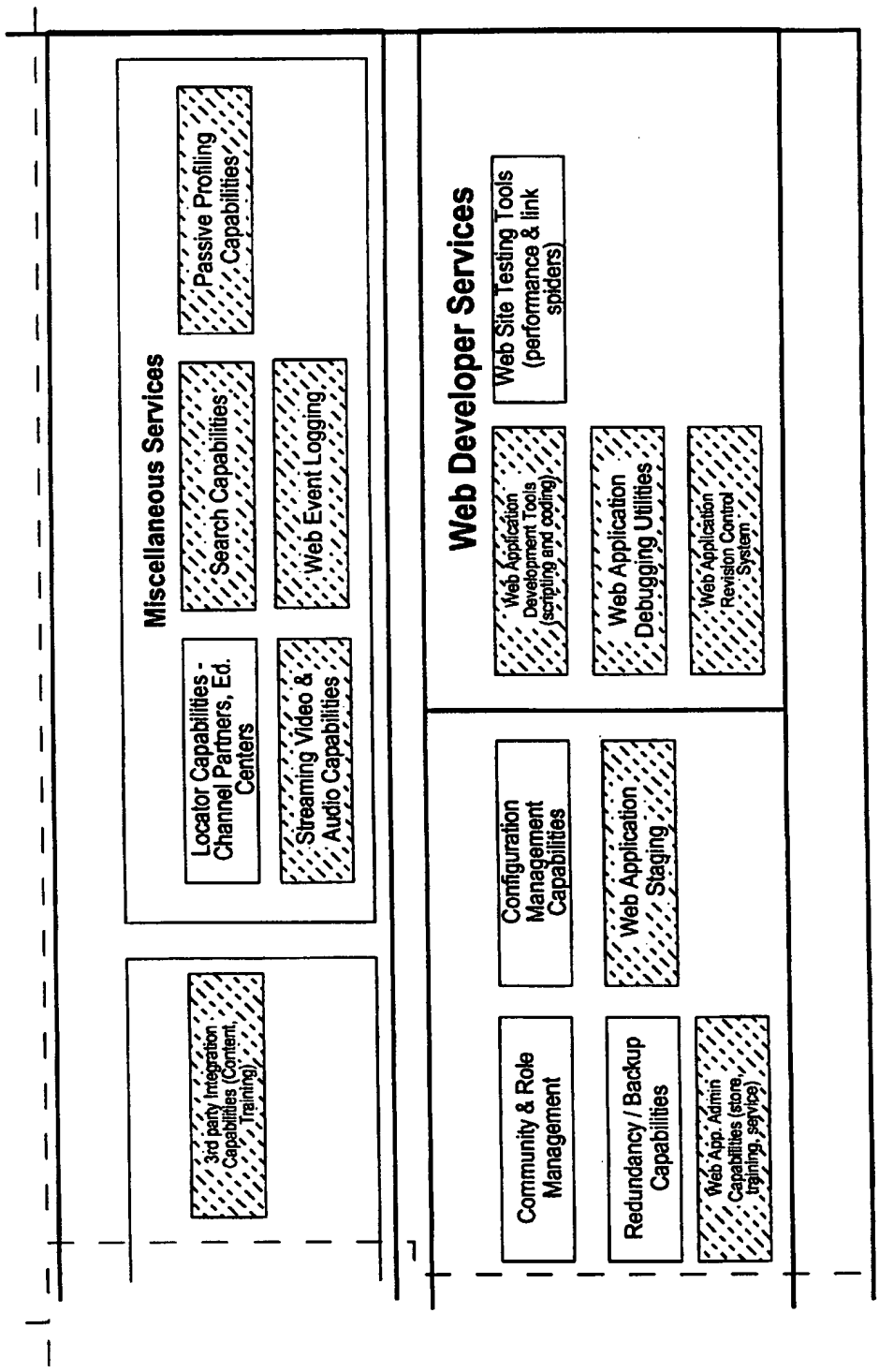
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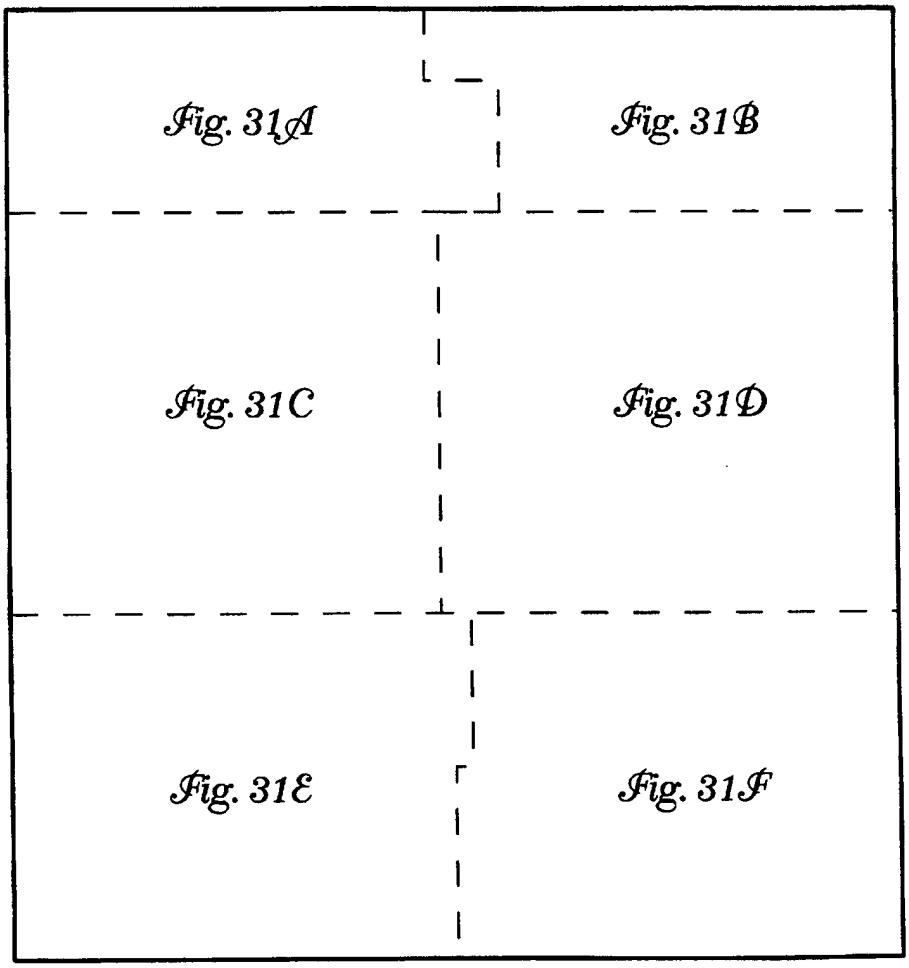
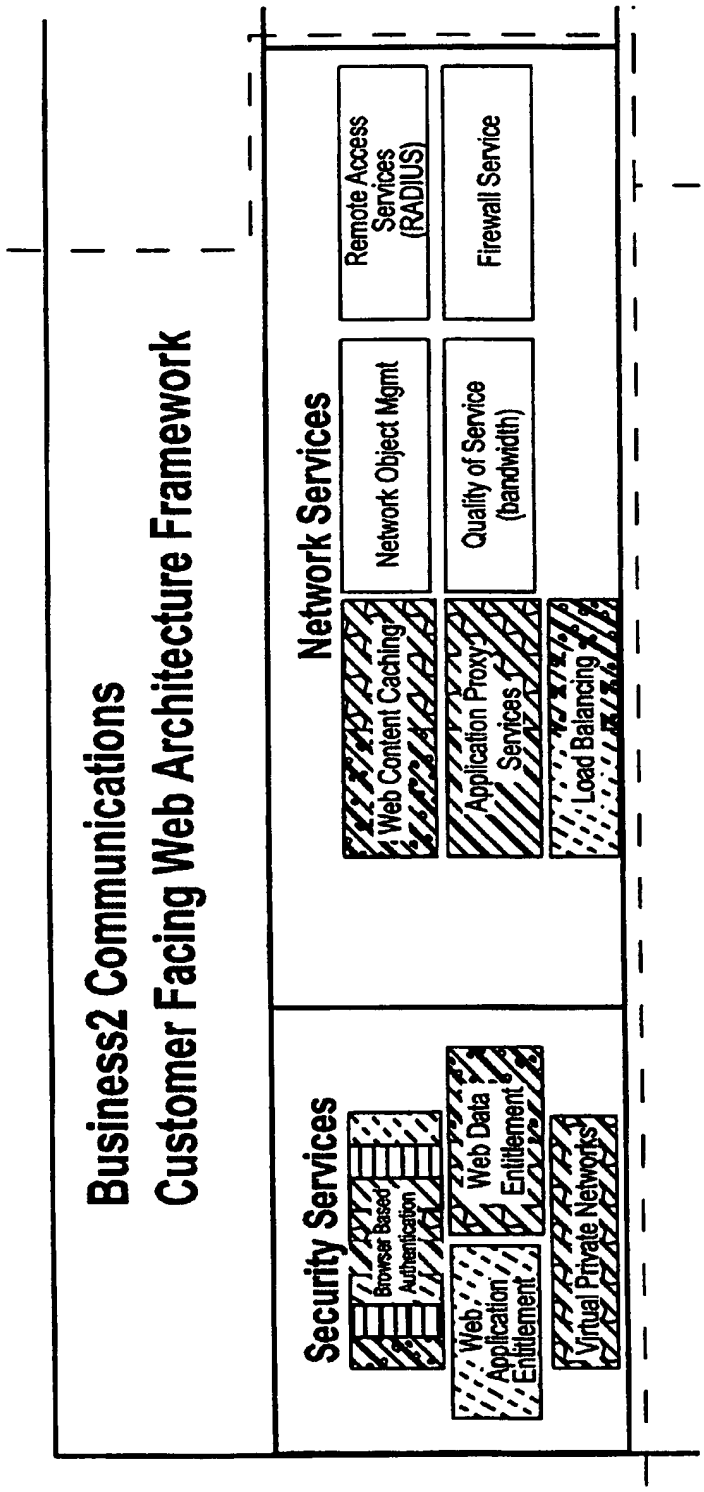


Fig. 31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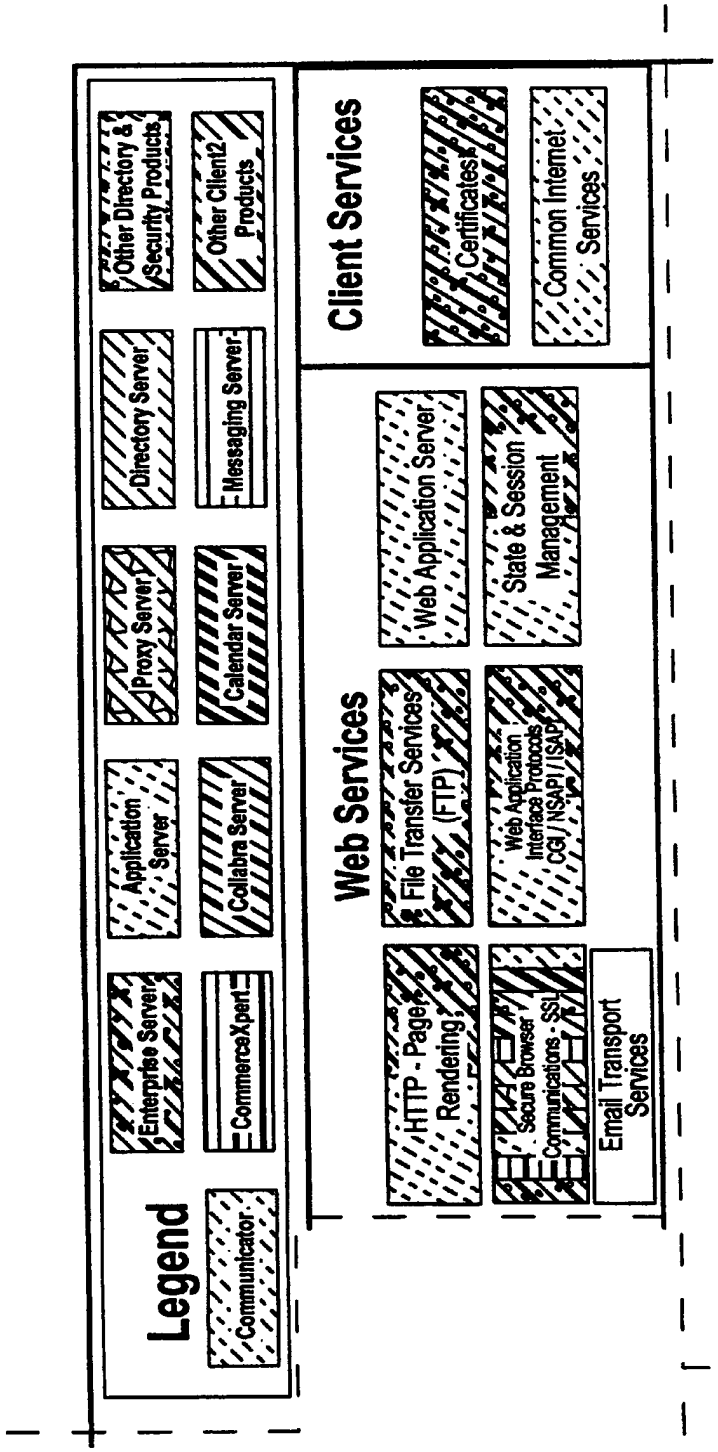
Legend
Communicator
Enterprise Server
CommerceXpert
Application Server
Collabra Server
Proxy Server
Calendar Server
Directory Server
Messaging Server
Other Directory & Security Products
Other Client2 Products
Client Services
Certificates
Common Internet Services
Web Services
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Web Application Interface Protocols CGI / NSAPI / ISAPI
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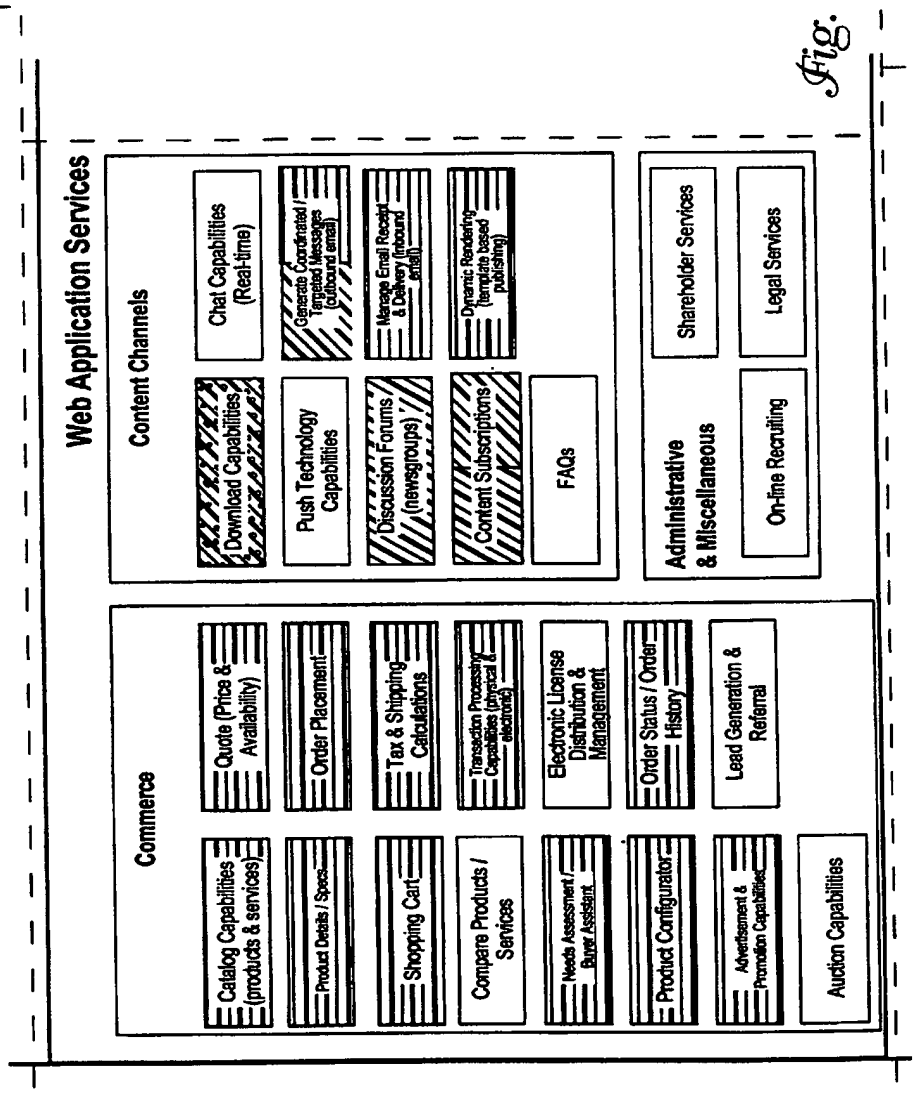
Email Transport Services

Fig. 31B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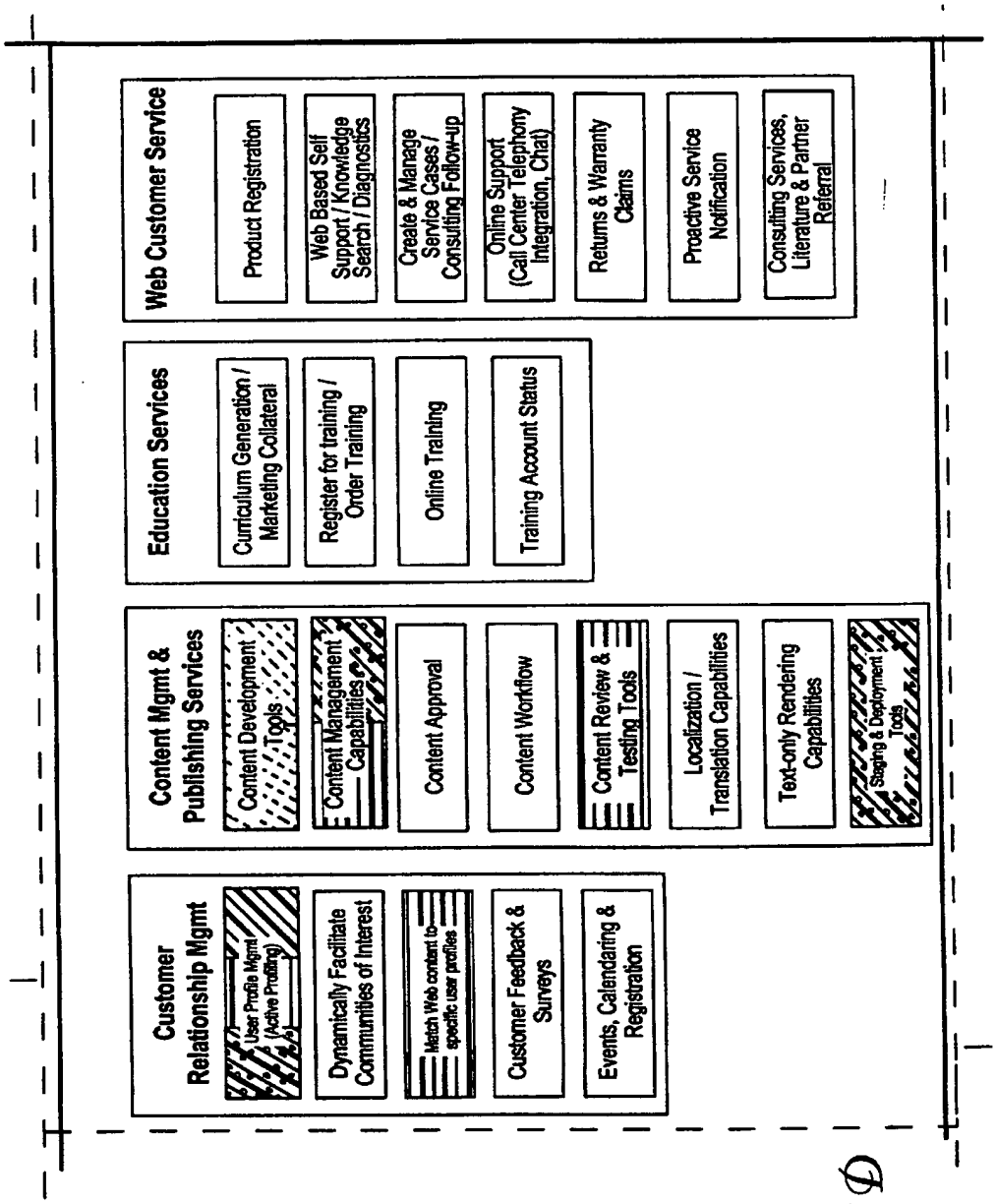
On-line Recruiting
Legal Services

Fig. 31C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Consulting Services, Literature & Partner Referral

Fig. 31D

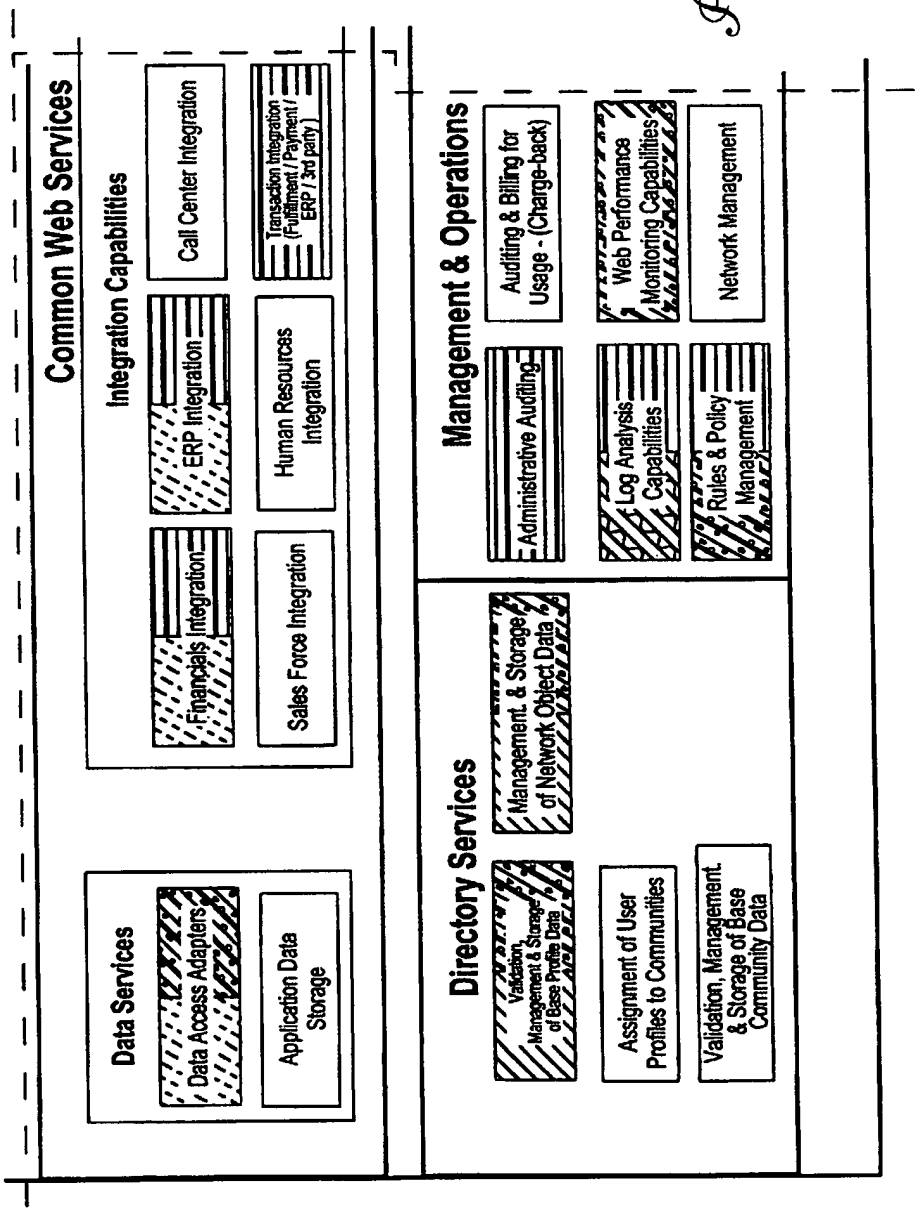

Common Web Services
Data Services
Data Access Adapters
Application Data Storage
Integration Capabilities
Financials Integration
ERP Integration
Call Center Integration
Sales Force Integration
Human Resources Integration
Transaction Integration (Fulfillment / Payment / ERP / 3rd party)
Management & Operations
Administrative Auditing
Auditing & Billing for Usage - (Charge-back)
Log Analysis Capabilities
Web Performance Monitoring Capabilities
Rules & Policy Management
Network Management
Directory Services
Validation, Management & Storage of Base Profile Data
Management & Storage of Network Object Data
Assignment of User Profiles to Communities
Validation, Management & Storage of Base Community Data

Fig. 31E

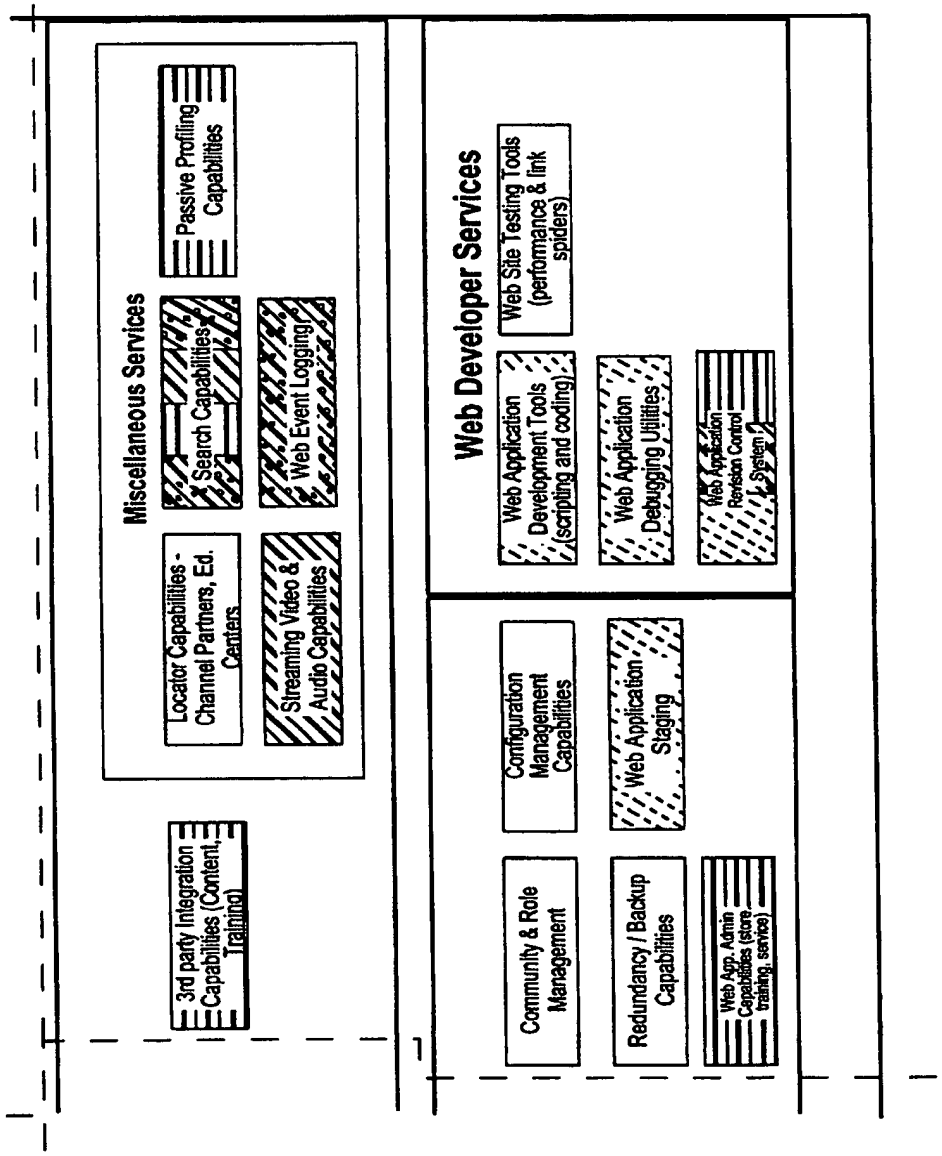

Miscellaneous Services
Passive Profiling Capabilities
Search Capabilities
Web Event Logging
Locator Capabilities - Channel Partners, Ed. Centers
Streaming Video & Audio Capabilities
3rd party Integration Capabilities (Content, Training)
Web Developer Services
Web Site Testing Tools (performance & link spiders)
Web Application Development Tools (scripting and coding)
Web Application Debugging Utilities
Web Application Revision Control System
Configuration Management Capabilities
Web Application Staging
Community & Role Management
Redundancy / Backup Capabilities
Web App. Admin Capabilities (store training, service)

Fig. 31F

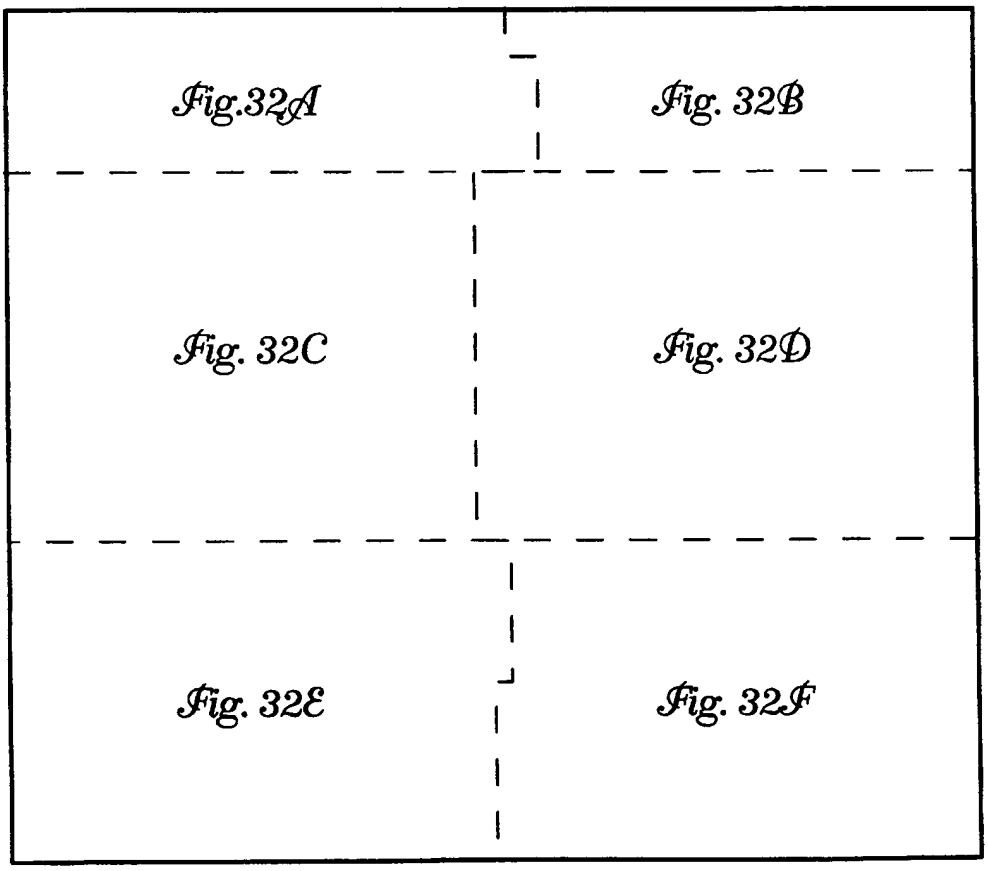


Fig. 32

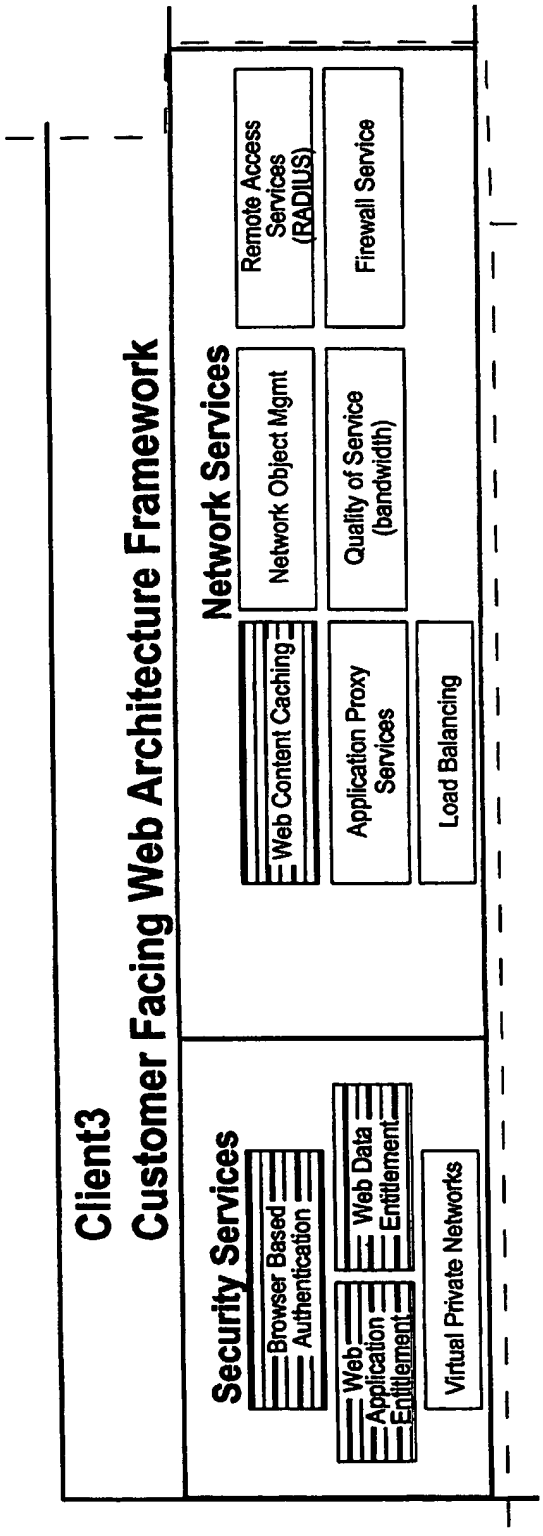

Client3
Customer Facing Web Architecture Framework
Network Services
Remote Access Services (RADIUS)
Firewall Service
Network Object Mgmt
Quality of Service (bandwidth)
Web Content Caching
Application Proxy Services
Load Balancing
Security Services
Browser Based Authentication
Web Data Entitlement
Web Application Entitlement
Virtual Private Networks

Fig. 32A

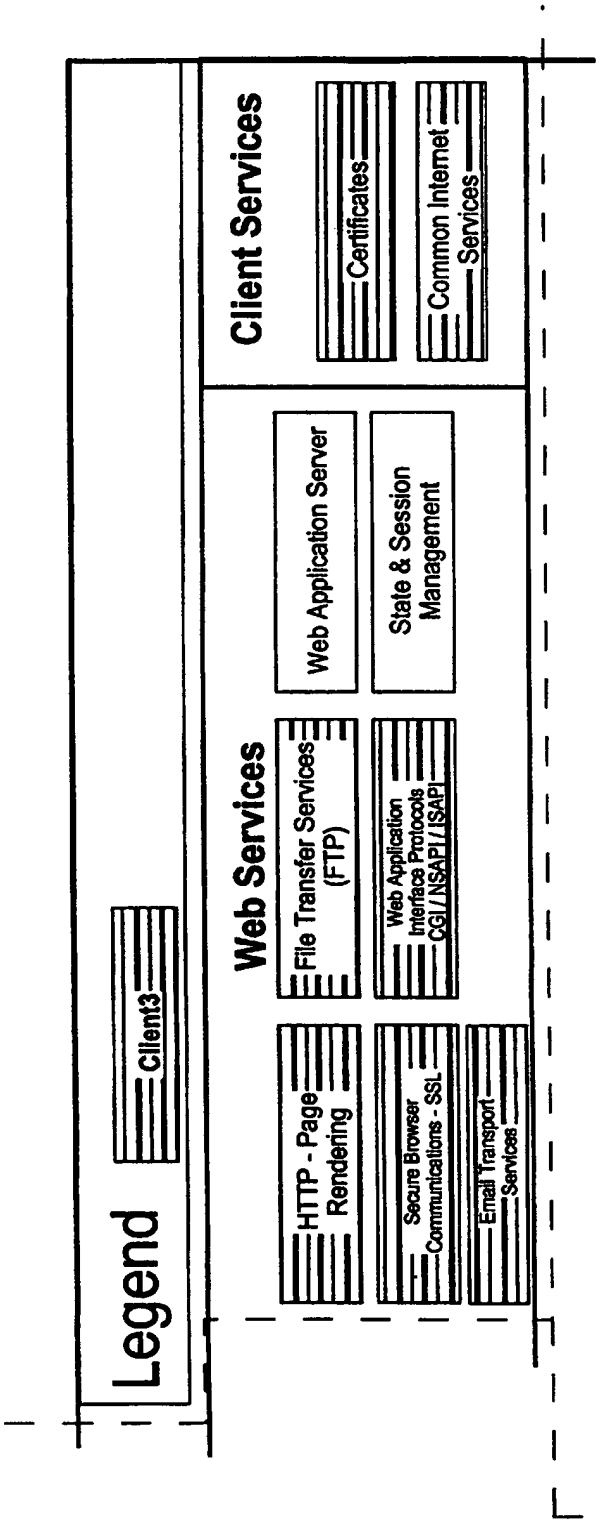

Legend
Client3
Client Services
Certificates
Common Internet Services
Web Services
Web Application Server
State & Session Management
File Transfer Services (FTP)
Web Application Interface Protocols CGI / NSAPI / ISAPI
HTTP - Page Rendering
Secure Browser Communications - SSL
Email Transport Services

Fig. 32B

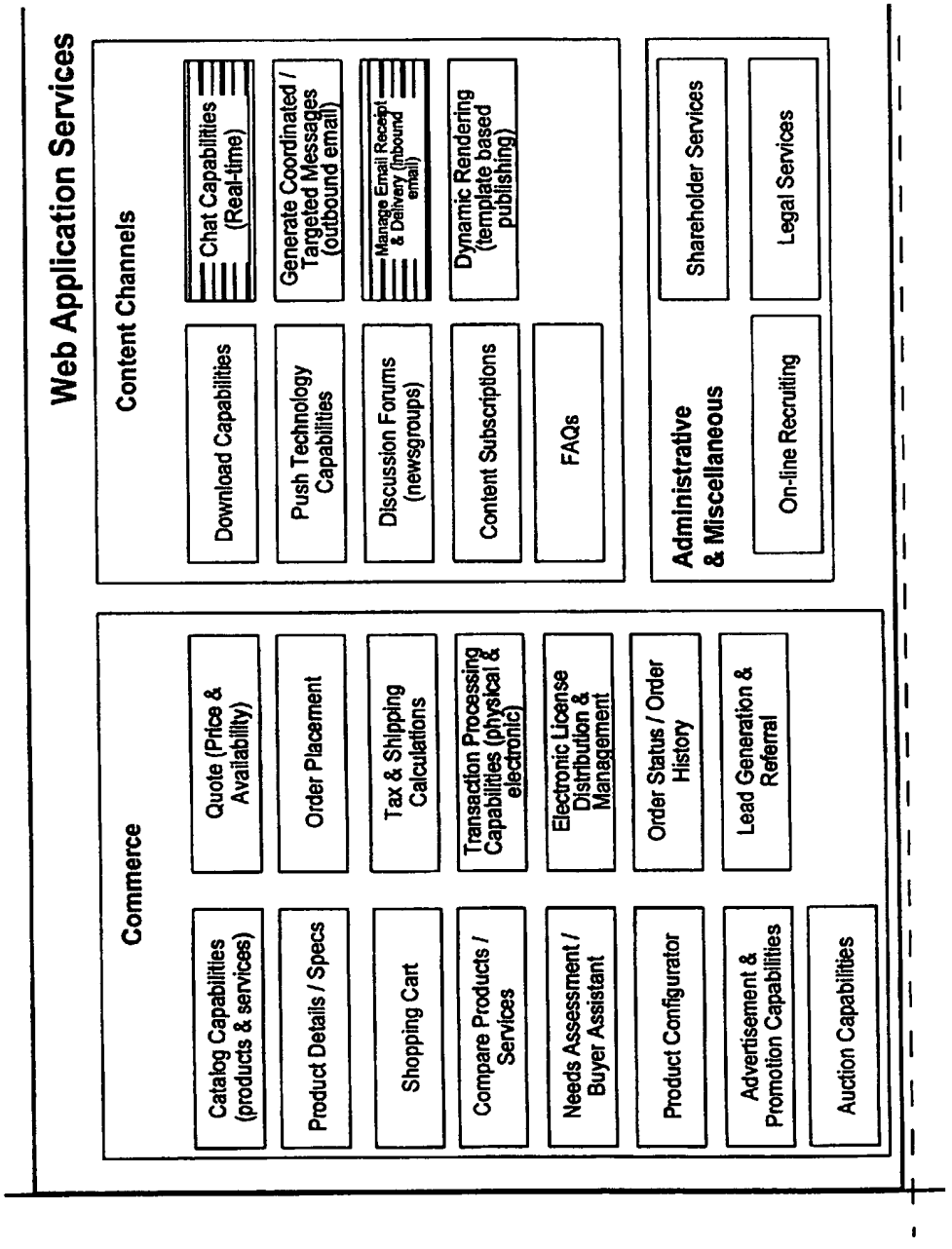

Web Application Services
Commerce
Catalog Capabilities (products & services)
Product Details / Specs
Shopping Cart
Compare Products / Services
Needs Assessment / Buyer Assistant
Product Configurator
Advertisement & Promotion Capabilities
Auction Capabilities
Quote (Price & Availability)
Order Placement
Tax & Shipping Calculations
Transaction Processing Capabilities (physical & electronic)
Electronic License Distribution & Management
Order Status / Order History
Lead Generation & Referral
Content Channels
Download Capabilities
Push Technology Capabilities
Discussion Forums (newsgroups)
Content Subscriptions
FAQs
Chat Capabilities (Real-time)
Generate Coordinated / Targeted Messages (outbound email)
Manage Email Receipt & Delivery (inbound email)
Dynamic Rendering (template based publishing)
Administrative & Miscellaneous
On-line Recruiting
Shareholder Services
Legal Services

Fig. 32C

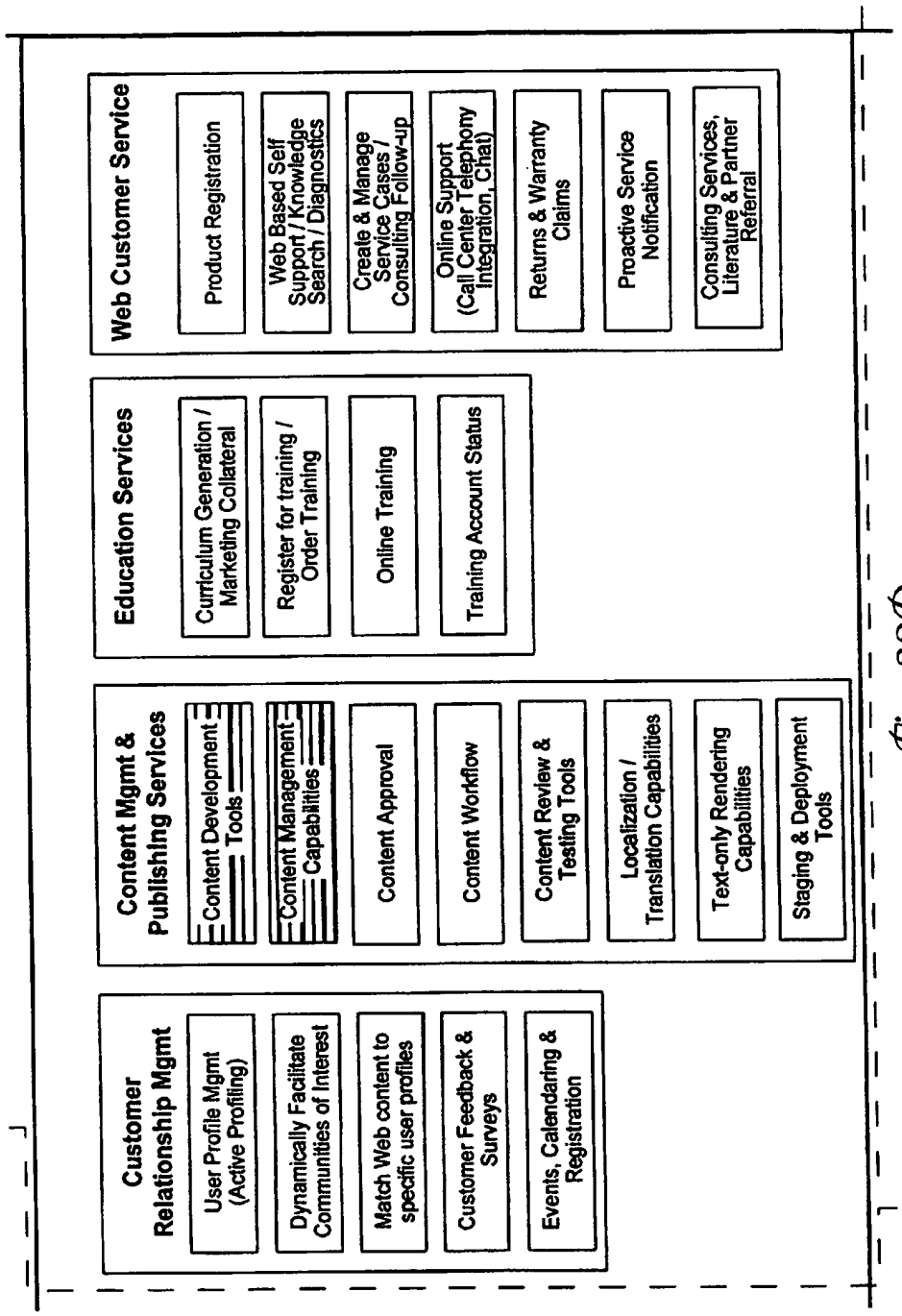
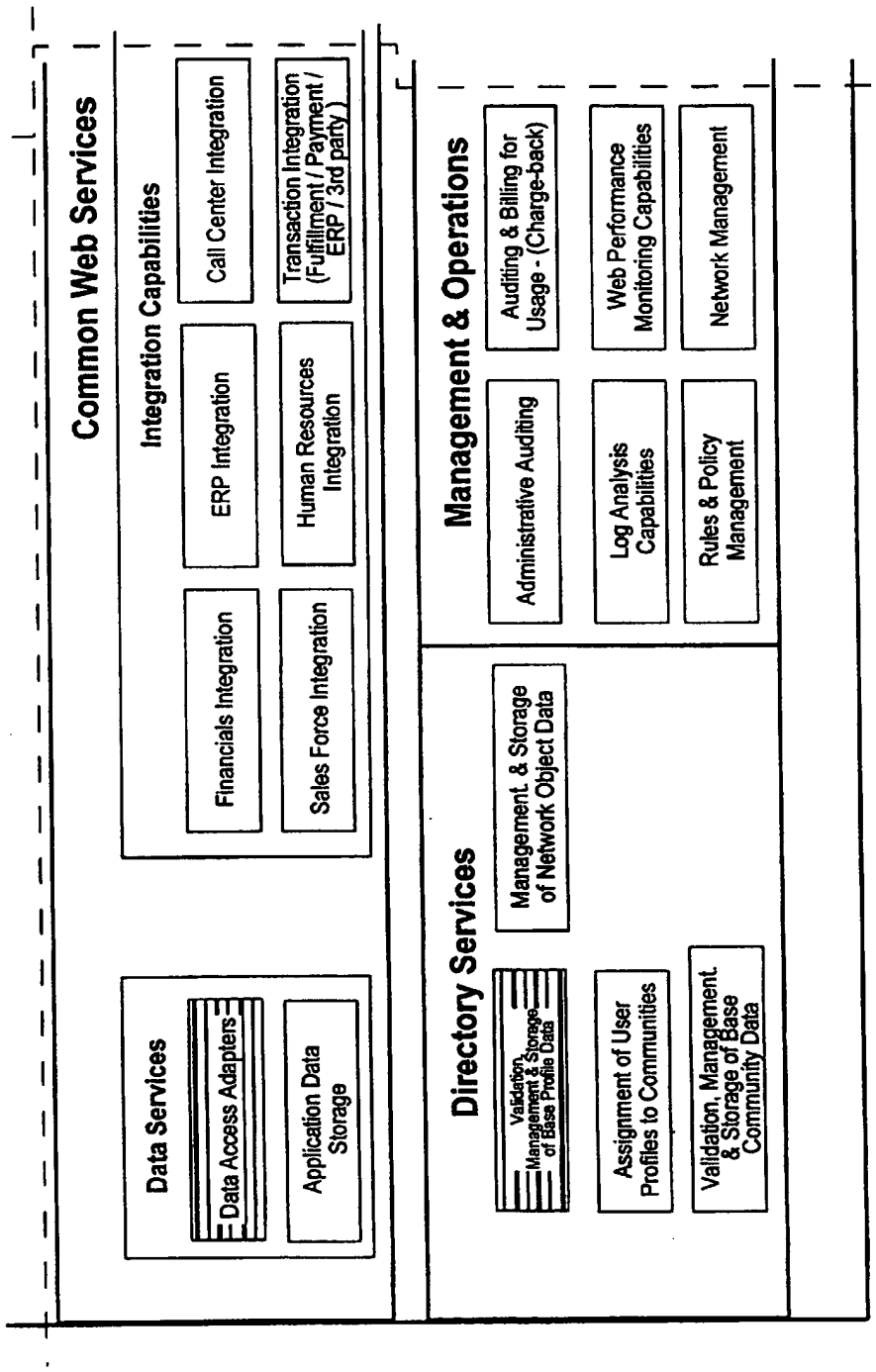

Customer Relationship Mgmt
User Profile Mgmt (Active Profiling)
Dynamically Facilitate Communities of Interest
Match Web content to specific user profiles
Customer Feedback & Surveys
Events, Calendaring & Registration
Content Mgmt & Publishing Services
Content Development Tools
Content Management Capabilities
Content Approval
Content Workflow
Content Review & Testing Tools
Localization / Translation Capabilities
Text-only Rendering Capabilities
Staging & Deployment Tools
Education Services
Curriculum Generation / Marketing Collateral
Register for training / Order Training
Online Training
Training Account Status
Web Customer Service
Product Registration
Web Based Self Support / Knowledge Search / Diagnostics
Create & Manage Service Cases / Consulting Follow-up
Online Support (Call Center Telephony Integration, Chat)
Returns & Warranty Claims
Proactive Service Notification
Consulting Services, Literature & Partner Referral

Fig. 32D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ERP Integration
Call Center Integration
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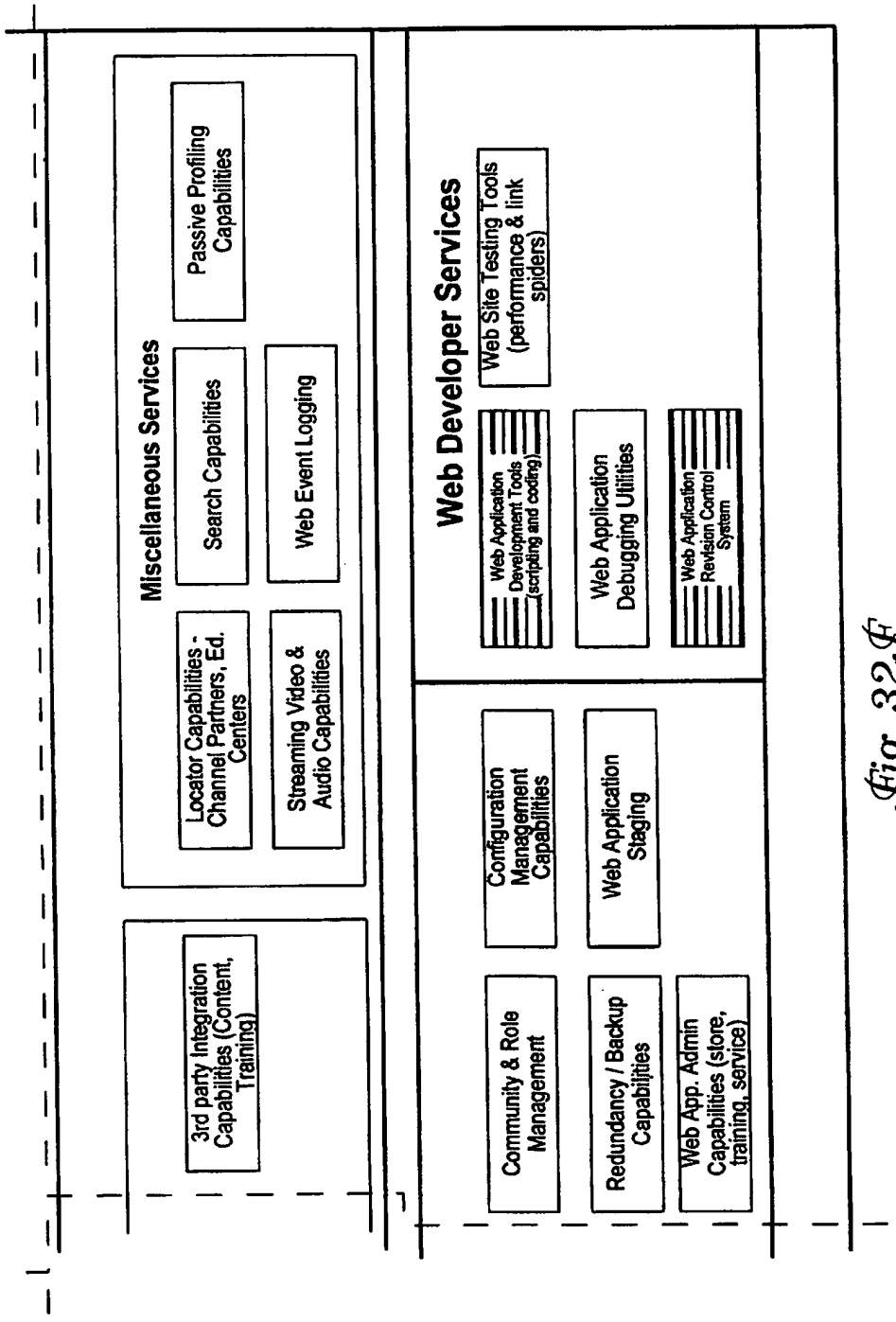
Log Analysis Capabilities
Web Performance Monitoring Capabilities
Rules & Policy Management
Network Management

Fig. 32E


Miscellaneous Services
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Web Application Debugging Utilities
Web Application Revision Control System
Configuration Management Capabilities
Web Application Staging
Community & Role Management
Redundancy / Backup Capabilities
Web App. Admin Capabilities (store, training, service)

Fig. 32F

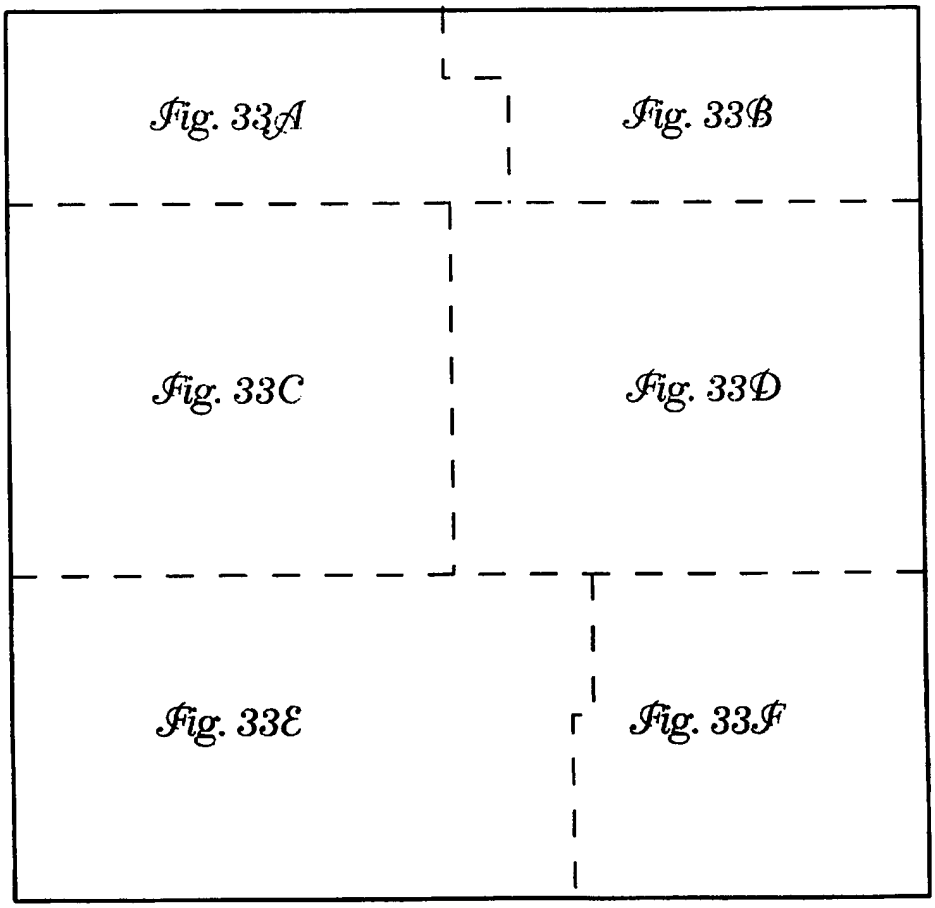
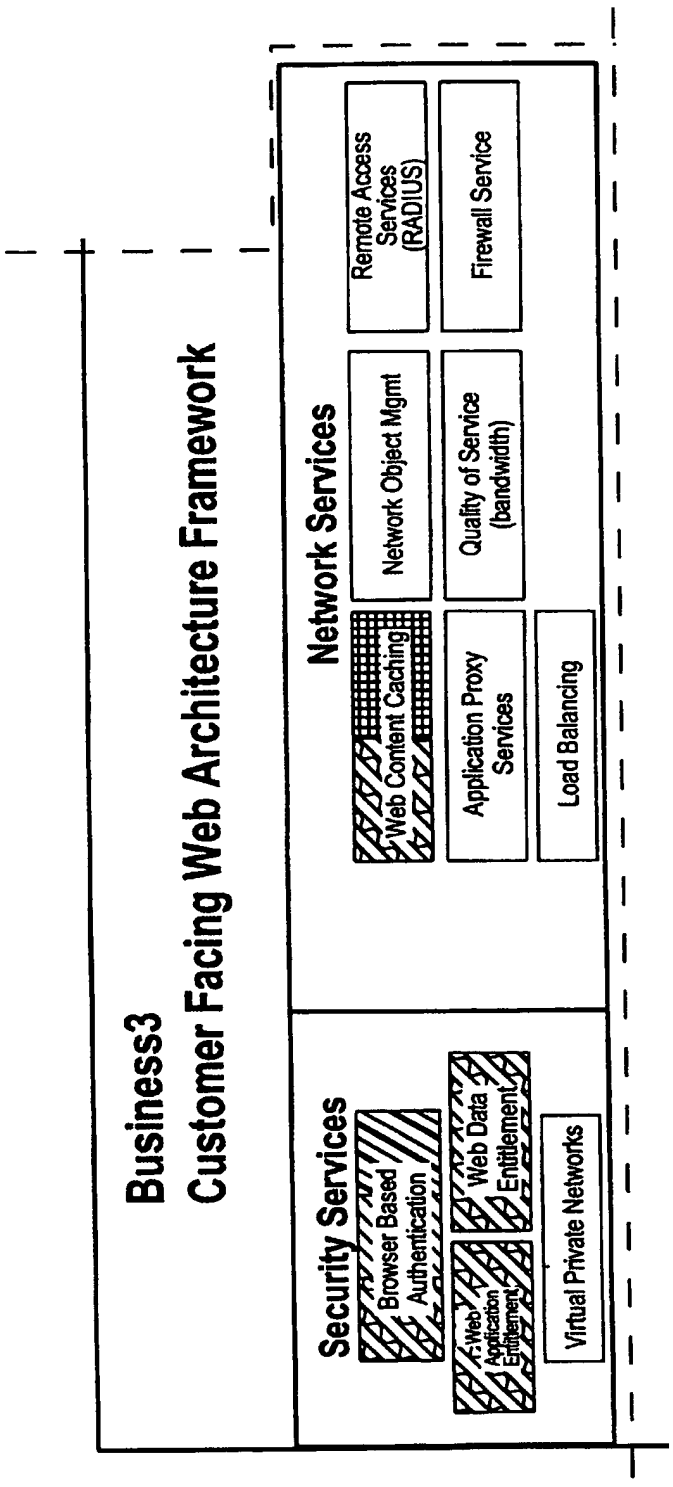


Fig. 33


Business3
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Network Object Mgmt
Quality of Service (bandwidth)
Web Content Caching
Application Proxy Services
Load Balancing
Security Services
Browser Based Authentication
Web Data Entitlement
Web Application Entitlement
Virtual Private Networks

Fig. 33A

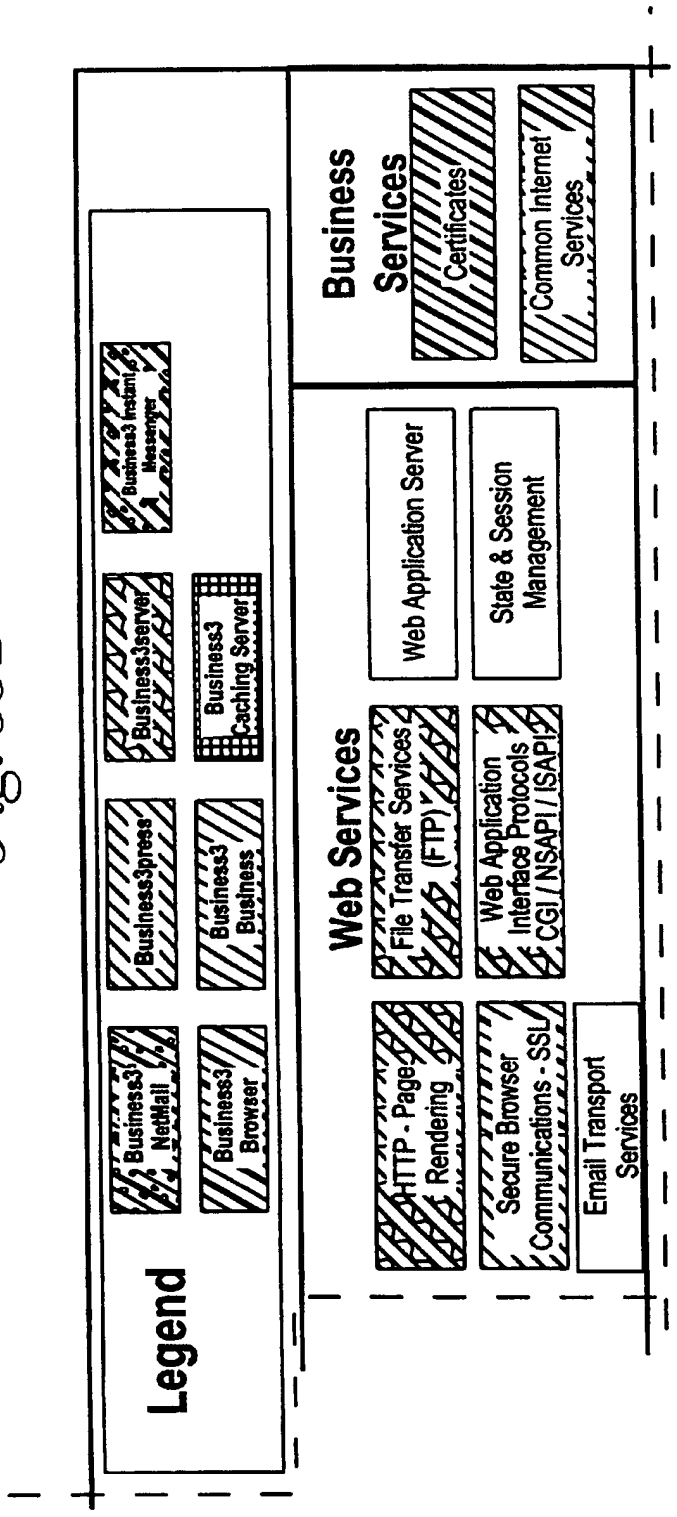
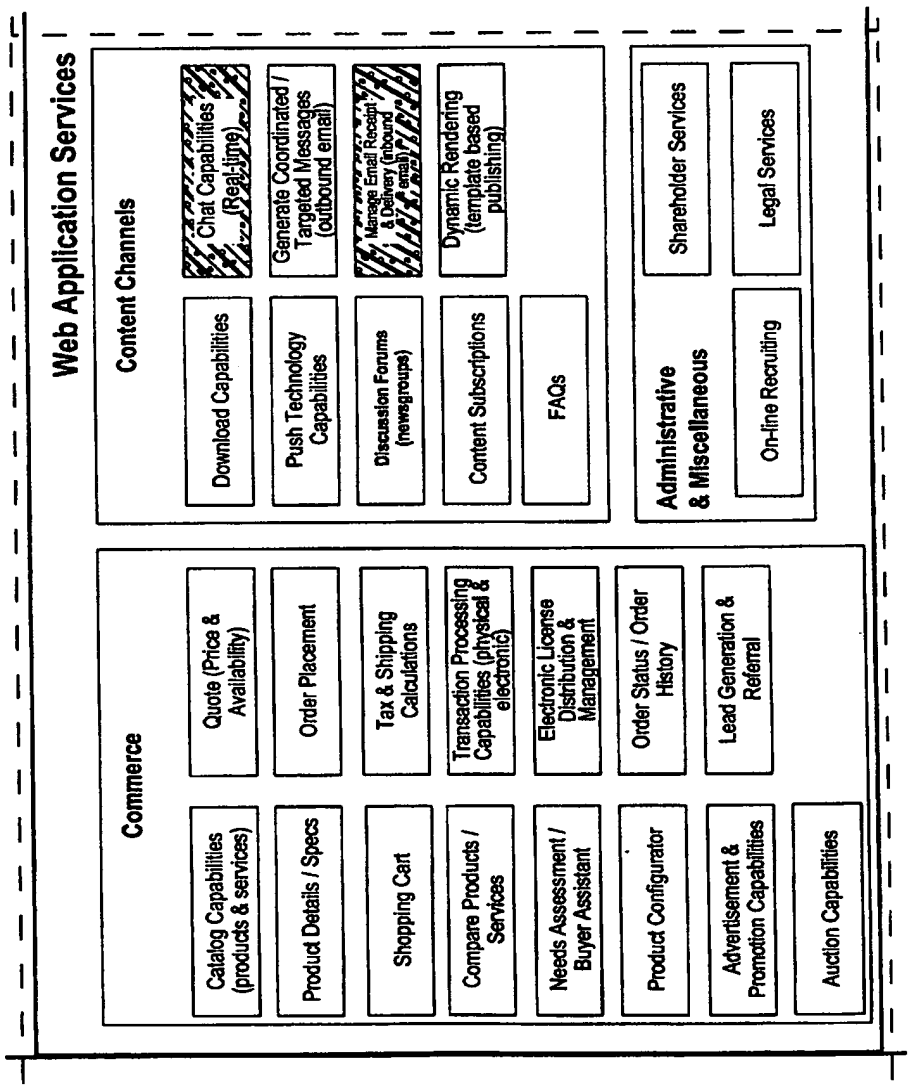

Legend
Business3 NetMail
Business3 Browser
Business3press
Business3 Business
Business3server
Business3 Caching Server
Business3 Instant Messenger
Web Services
HTTP - Page Rendering
File Transfer Services (FTP)
Email Transport Services
Web Application Secure Browser Communications - SSL
Web Application Interface Protocols CGI / NSAPI / ISAPI
Web Application Server
State & Session Management
Business Services
Certificates
Common Internet Services

Fig. 33B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Order Placement
Shopping Cart
Tax & Shipping Calculations
Compare Products / Services
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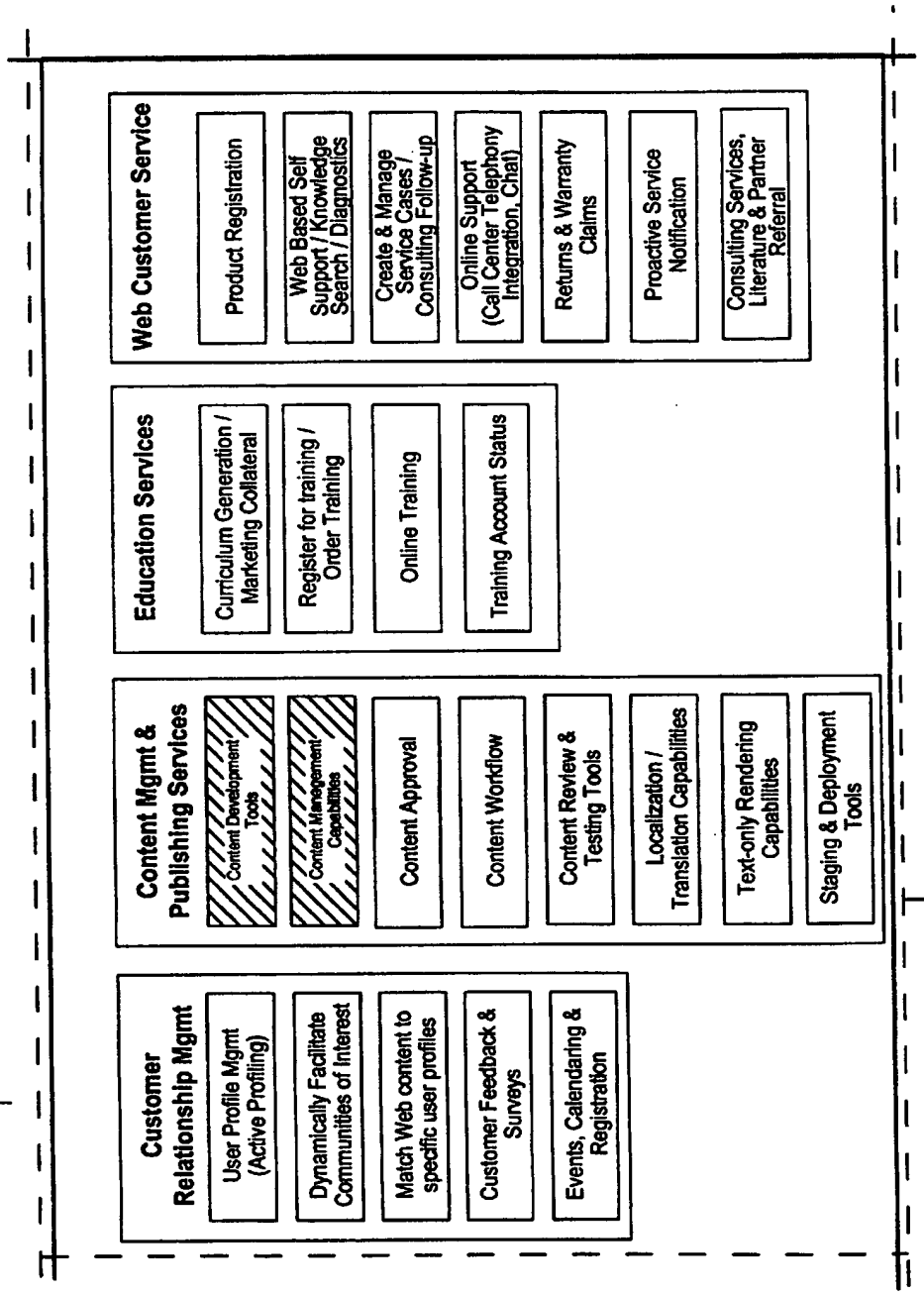
Needs Assessment / Buyer Assistant
Electronic License Distribution & Management
Product Configurator
Order Status / Order History
Advertisement & Promotion Capabilities
Lead Generation & Referral
Auction Capabilities
Content Channels
Download Capabilities
Chat Capabilities (Real-time)
Push Technology Capabilities
Generate Coordinated / Targeted Messages (outbound email)
Discussion Forums (newsgroups)
Manage Email Receipt & Delivery (inbound email)
Content Subscriptions
Dynamic Rendering (template based publishing)
FAQs
Administrative & Miscellaneous
Shareholder Services
On-line Recruiting
Legal Services

Fig. 33C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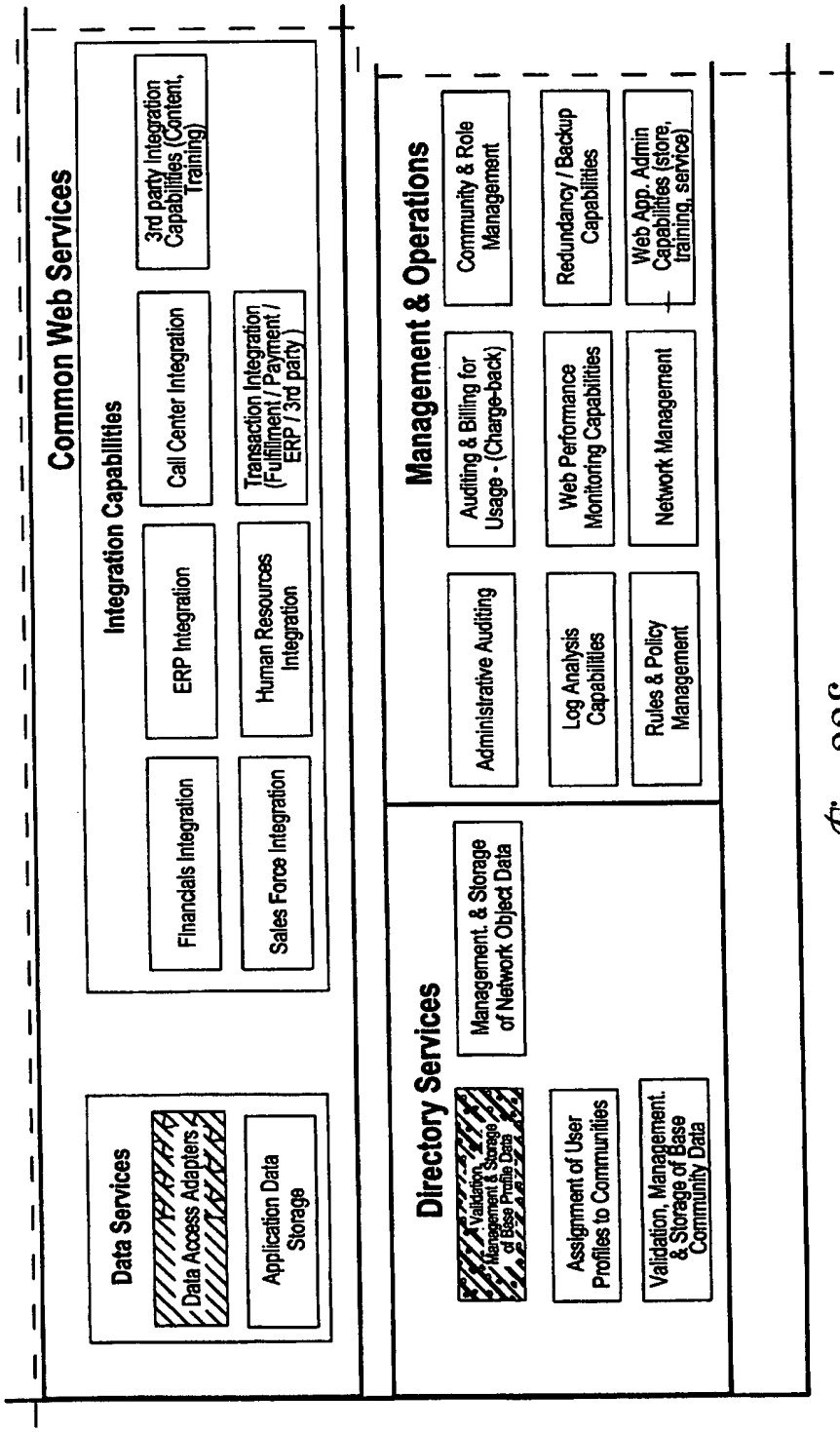
Online Support (Call Center Telephony Integration, Chat)
Returns & Warranty Claims
Proactive Service Notification
Consulting Services, Literature & Partner Referral

Fig. 33D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Redundancy / Backup Capabilities
Rules & Policy Management
Network Management
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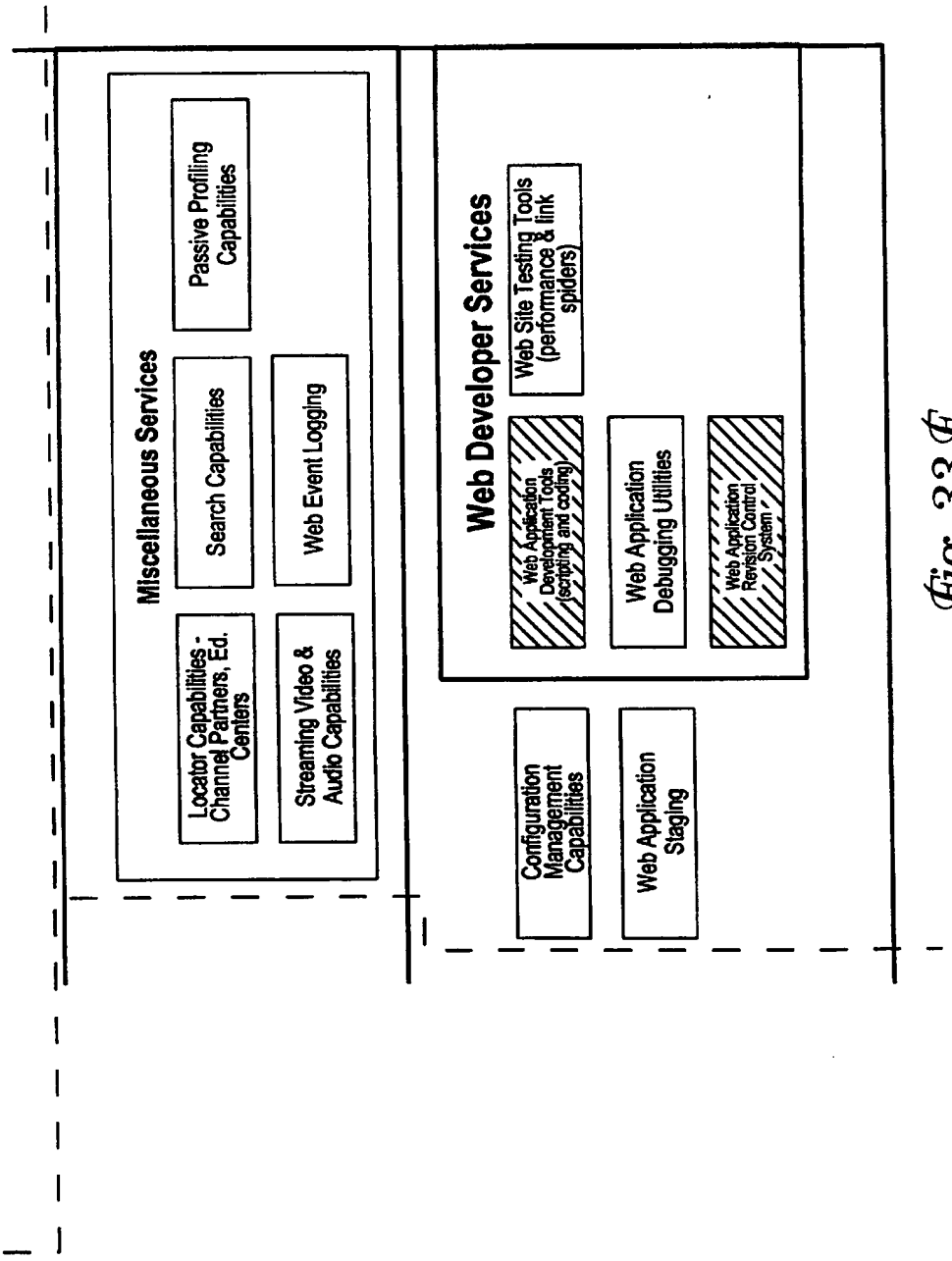
Fig. 33E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Streaming Video & Audio Capabilities
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Web Application Development Tools (scripting and coding)
Web Application Debugging Utilities
Web Application Revision Control System
Configuration Management Capabilities
Web Application Staging

Fig. 33F

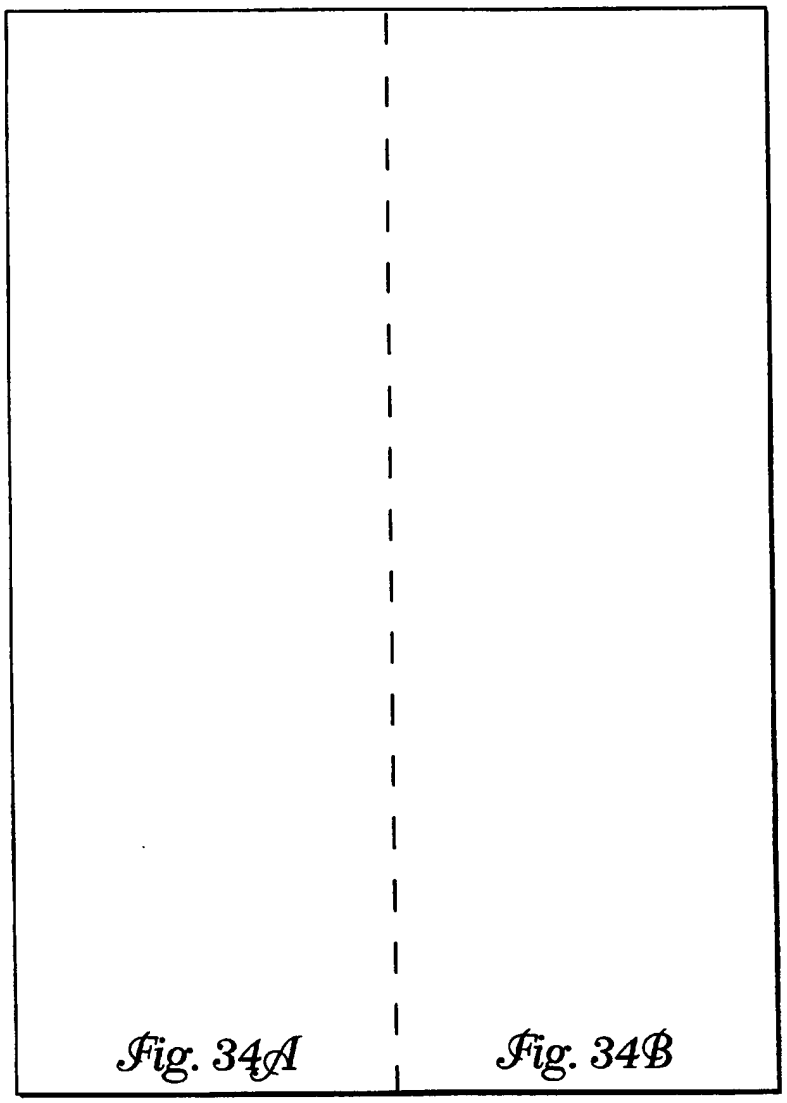


Fig. 34

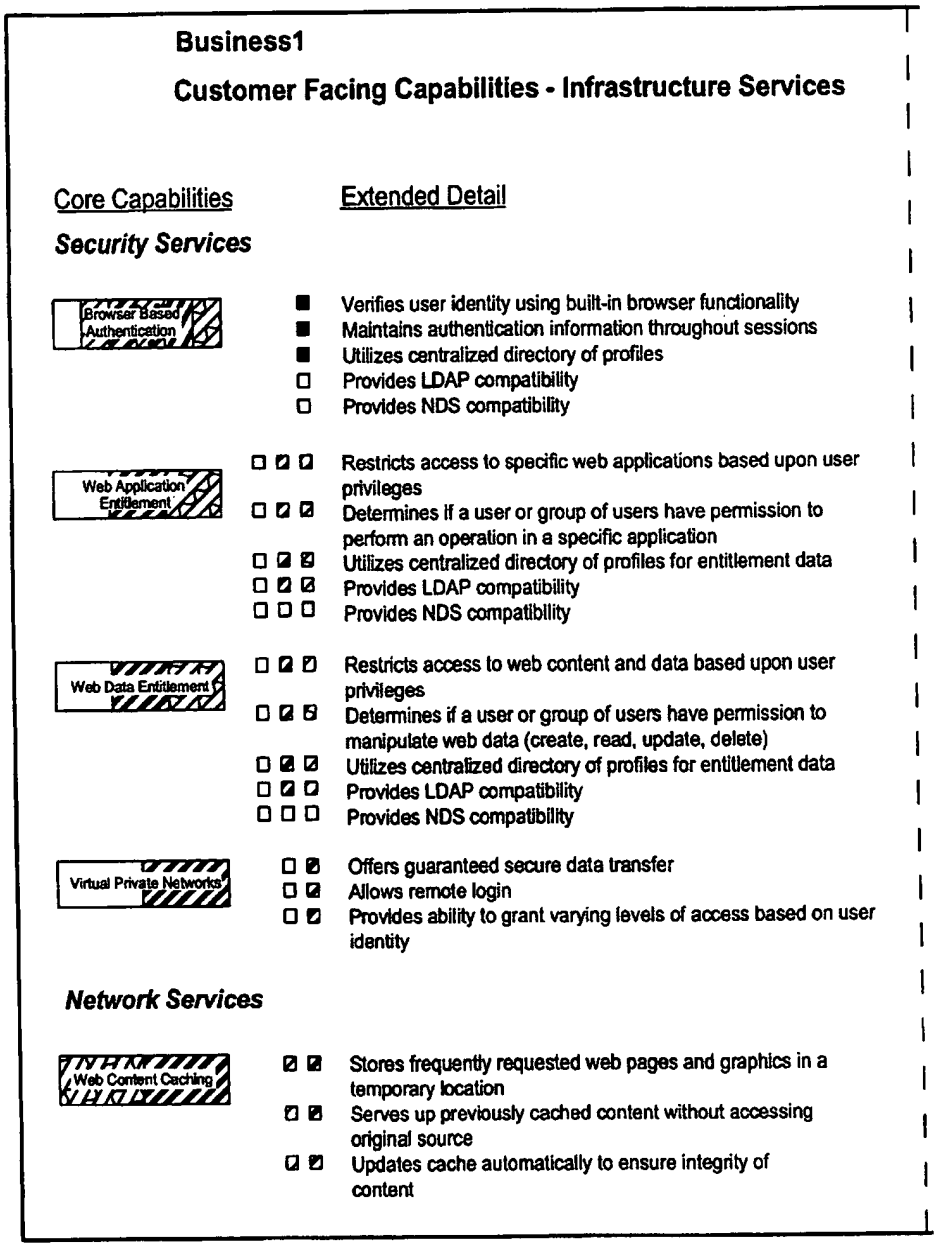

Business1
Customer Facing Capabilities - Infrastructure Services
Core Capabilities
Extended Detail
Security Services
Browser Based Authentication
Verifies user identity using built-in browser functionality
Maintains authentication information throughout sessions
Utilizes centralized directory of profiles
Provides LDAP compatibility
Provides NDS compatibility
Web Application Entitlement
Restricts access to specific web applications based upon user privileges
Determines if a user or group of users have permission to perform an operation in a specific application
Utilizes centralized directory of profiles for entitlement data
Provides LDAP compatibility
Provides NDS compatibility
Web Data Entitlement
Restricts access to web content and data based upon user privileges
Determines if a user or group of users have permission to manipulate web data (create, read, update, delete)
Utilizes centralized directory of profiles for entitlement data
Provides LDAP compatibility
Provides NDS compatibility
Virtual Private Networks
Offers guaranteed secure data transfer
Allows remote login
Provides ability to grant varying levels of access based on user identity
Network Services
Web Content Caching
Stores frequently requested web pages and graphics in a temporary location
Serves up previously cached content without accessing original source
Updates cache automatically to ensure integrity of content

Fig. 34A

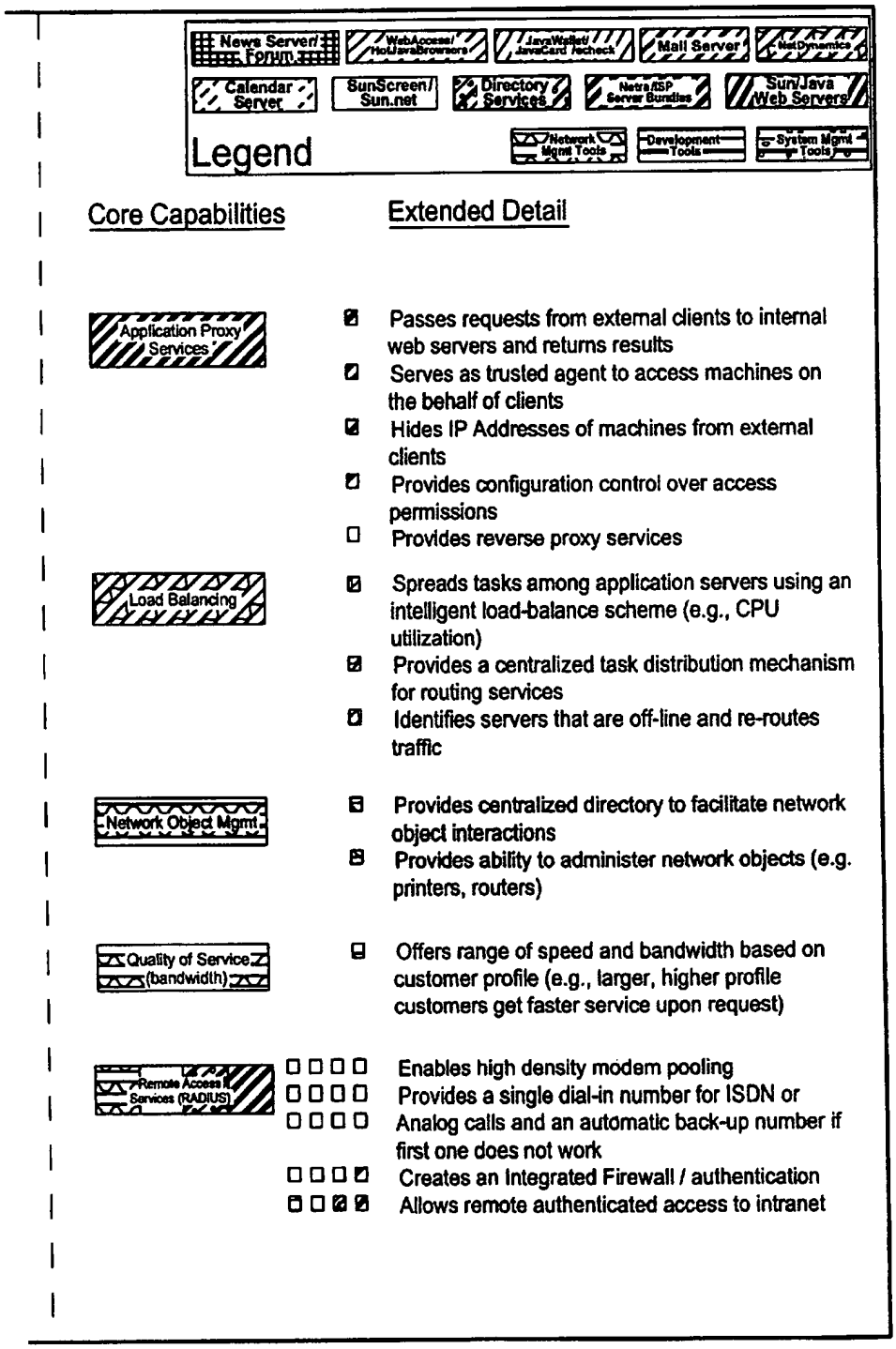
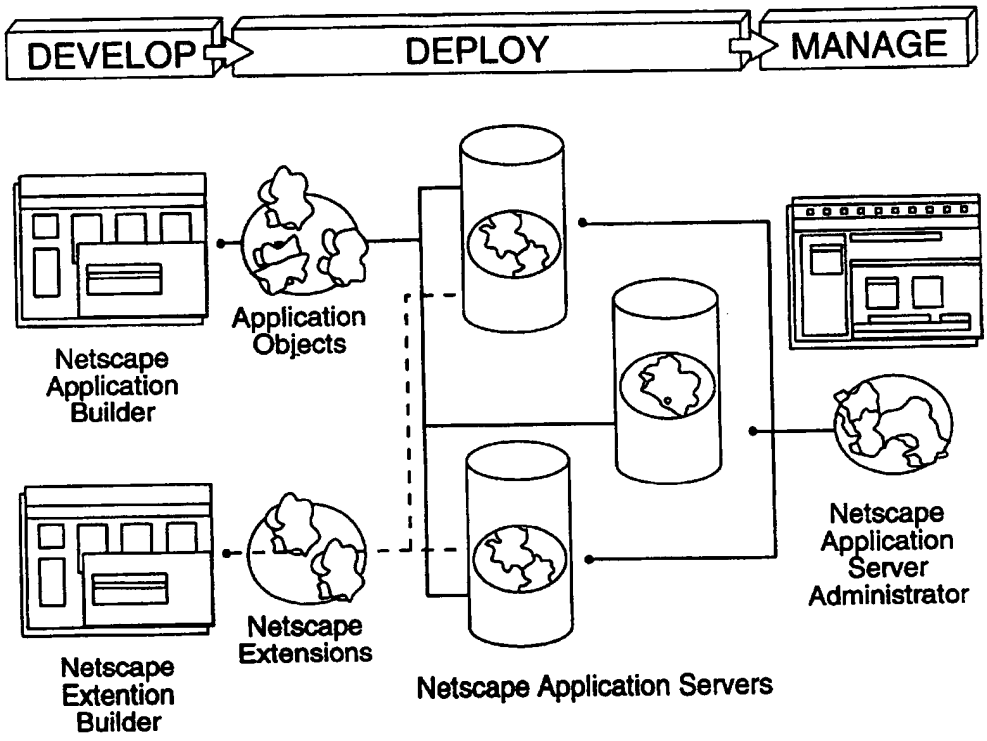

News Server/ Forum
WebAccess/ HotJavaBrowsers
JavaWallet/ JavaCard Techeck
Mail Server
NetDynamics
Calendar Server
SunScreen/ Sun.net
Directory Services
Netra/ISP Server Bundles
Sun/Java Web Servers
Legend
Network Mgmt Tools
Development Tools
System Mgmt Tools
Core Capabilities
Extended Detail
Application Proxy Services
Passes requests from external clients to internal web servers and returns results
Serves as trusted agent to access machines on the behalf of clients
Hides IP Addresses of machines from external clients
Provides configuration control over access permissions
Provides reverse proxy services
Load Balancing
Spreads tasks among application servers using an intelligent load-balance scheme (e.g., CPU utilization)
Provides a centralized task distribution mechanism for routing services
Identifies servers that are off-line and re-routes traffic
Network Object Mgmt
Provides centralized directory to facilitate network object interactions
Provides ability to administer network objects (e.g. printers, routers)
Quality of Service (bandwidth)
Offers range of speed and bandwidth based on customer profile (e.g., larger, higher profile customers get faster service upon request)
Remote Access Services (RADIUS)
Enables high density modem pooling
Provides a single dial-in number for ISDN or Analog calls and an automatic back-up number if first one does not work
Creates an Integrated Firewall / authentication
Allows remote authenticated access to intranet

Fig. 34B

Client2 Application Server



Client2 Application Server

Fig. 35

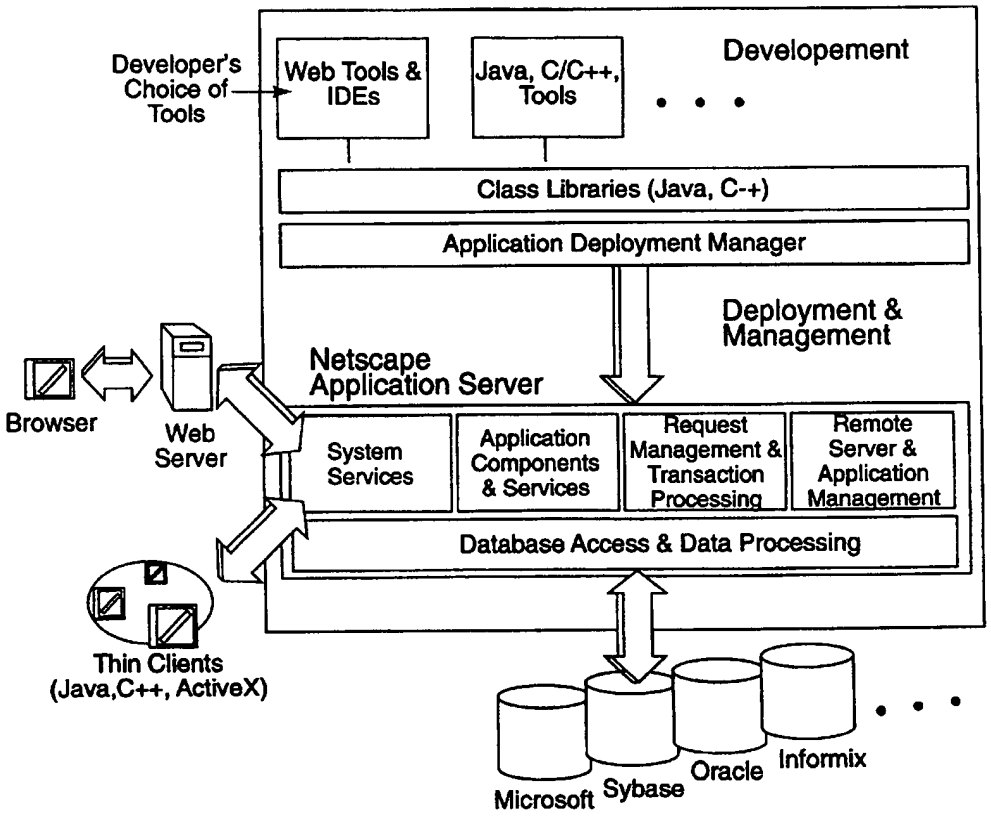

Developer's Choice of Tools
Web Tools & IDEs
Java, C/C++, Tools
Developement
Class Libraries (Java, C-+)
Application Deployment Manager
Deployment & Management
Netscape Application Server
Browser
Web Server
System Services
Application Components & Services
Request Management & Transaction Processing
Remote Server & Application Management
Database Access & Data Processing
Thin Clients (Java,C++, ActiveX)
Microsoft
Sybase
Oracle
Informix

Fig. 36

Client2 ECXpert

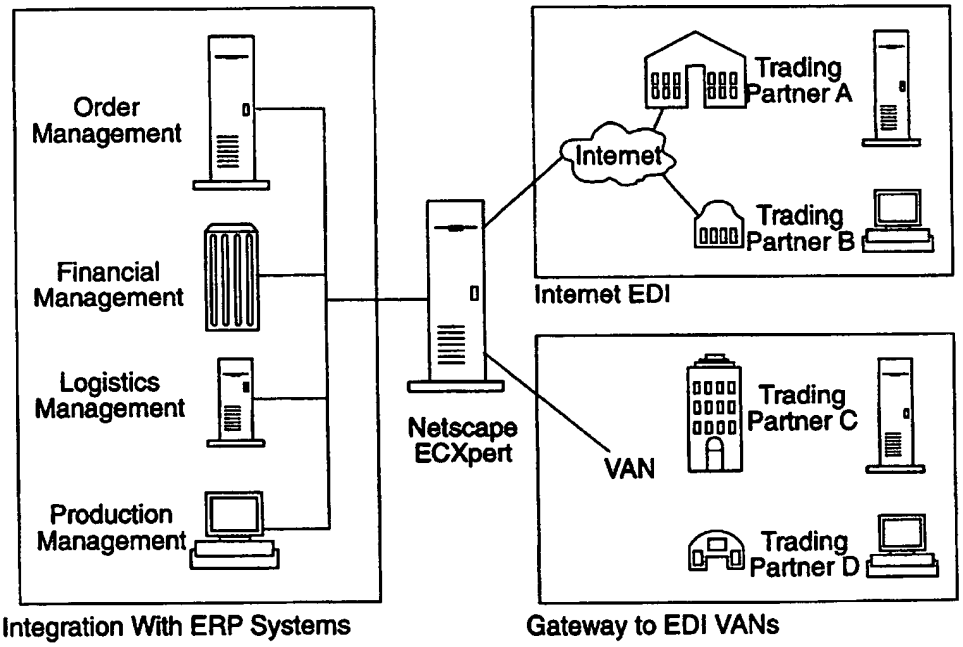


Fig. 37

Client2 ECXpert

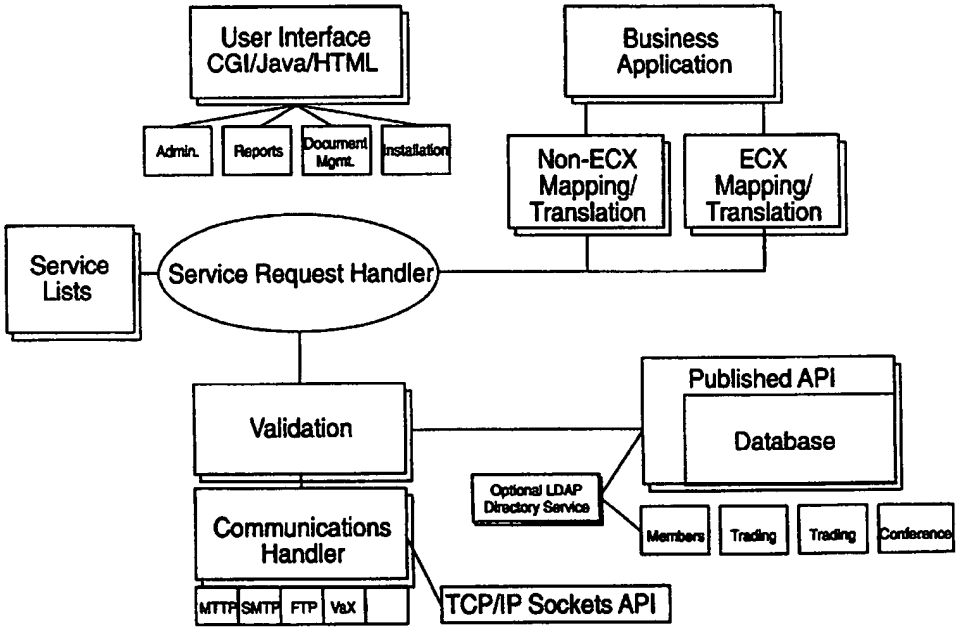


Fig. 38

Client2 SellerXpert

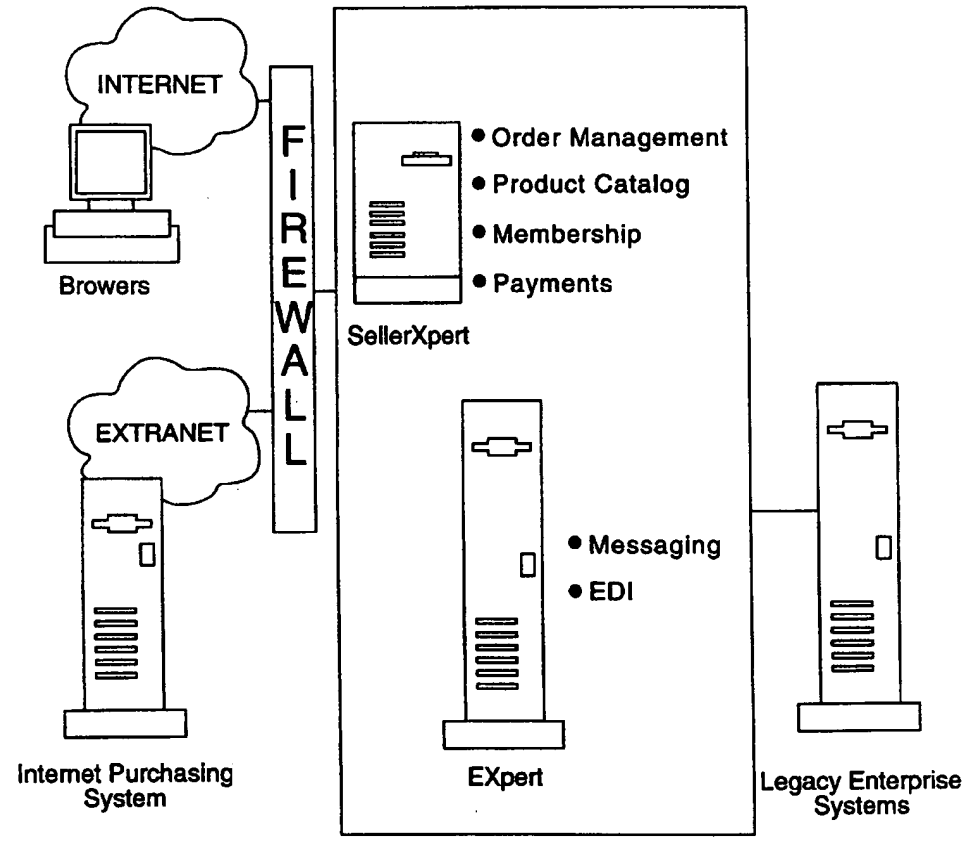


Fig. 39

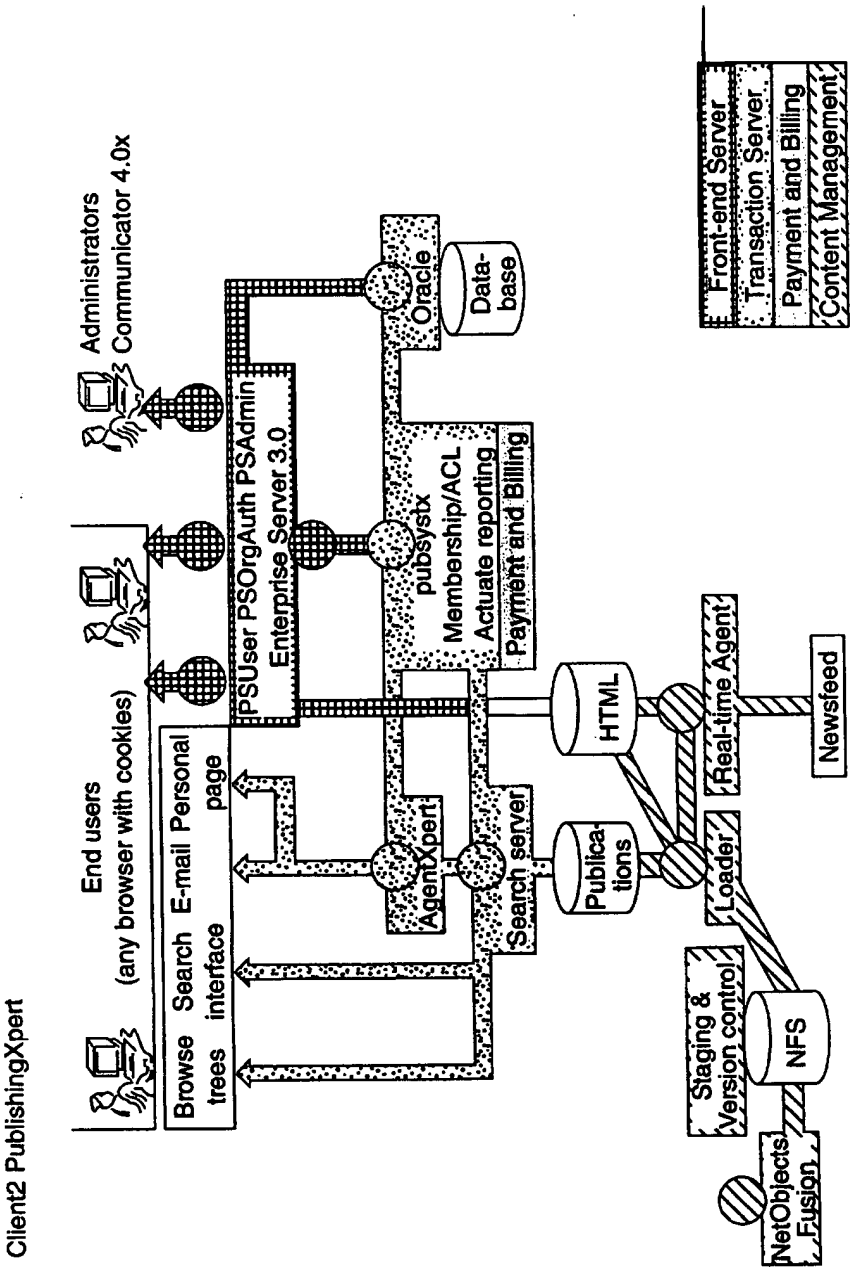

Client2 PublishingXpert
End users
(any browser with cookies)
Administrators
Communicator 4.0x
Browse trees
Search interface
E-mail
Personal page
PSUser PSOrgAuth PSAdmin
Enterprise Server 3.0
AgentXpert
Search server
pubsystx
Membership/ACL
Actuate reporting
Payment and Billing
Oracle
Data-base
HTML
Publica-tions
Real-time Agent
Loader
Newsfeed
Staging & Version control
NFS
NetObjects Fusion
Front-end Server
Transaction Server
Payment and Billing
Content Management

Fig. 40

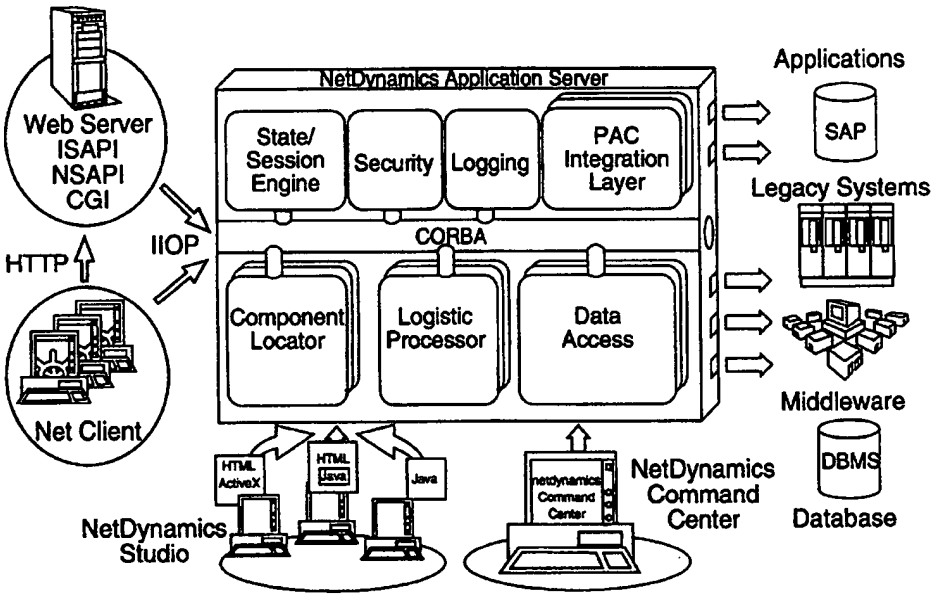

Web Server
ISAPI
NSAPI
CGI
HTTP
IIOP
Net Client
NetDynamics Application Server
State/
Session
Engine
Security
Logging
PAC
Integration
Layer
CORBA
Component
Locator
Logistic
Processor
Data
Access
Applications
SAP
Legacy Systems
Middleware
DBMS
Database
HTML
ActiveX
HTML
Java
Java
NetDynamics
Studio
netdynamics
Command
Center
NetDynamics
Command
Center
1 Any Web browser requests a dynamic-page
2 The Web server notifies ColdFusion
3 ColdFusion processes the dynamic-page based on the CFML tags
4 ColdFusion generates an HTML page
5 The Web server sends the HTML page to the browser

Fig. 41

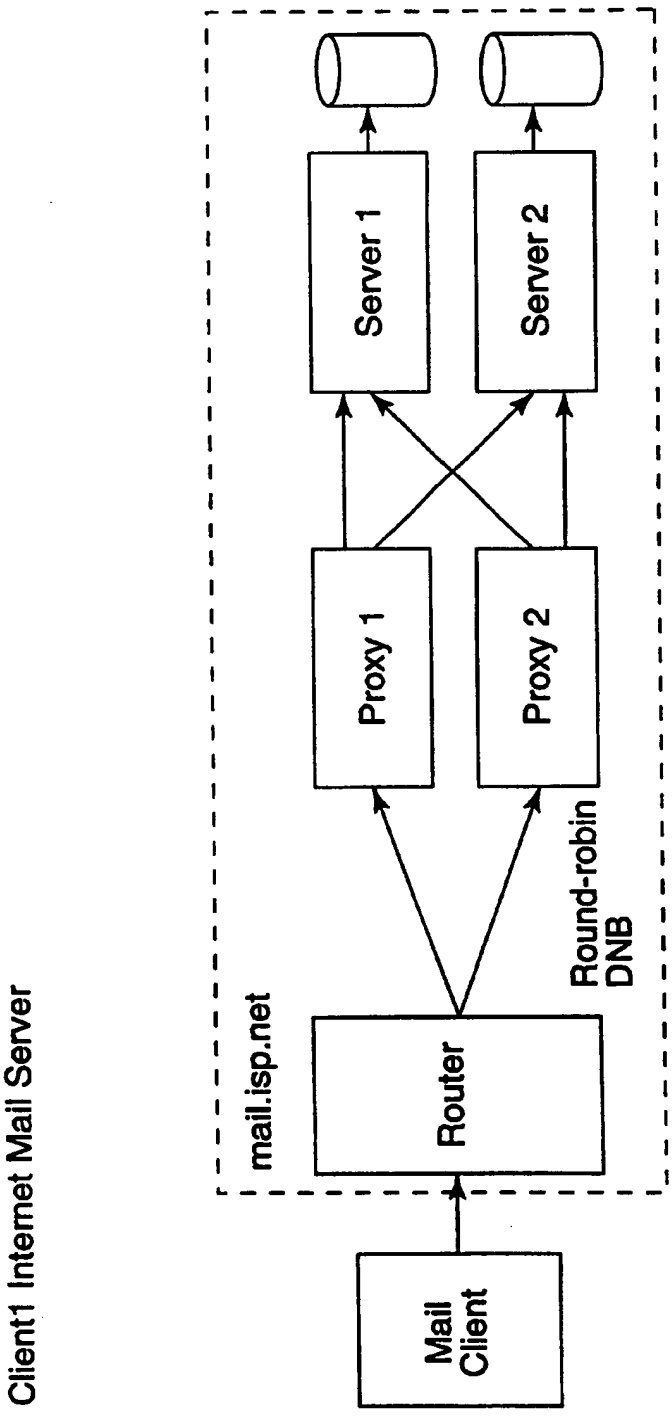

Client1 Internet Mail Server
mail.isp.net
Round-robin DNB
Mail Client
Router
Proxy 1
Proxy 2
Server 1
Server 2

Fig. 42

Client1 Internet News Server

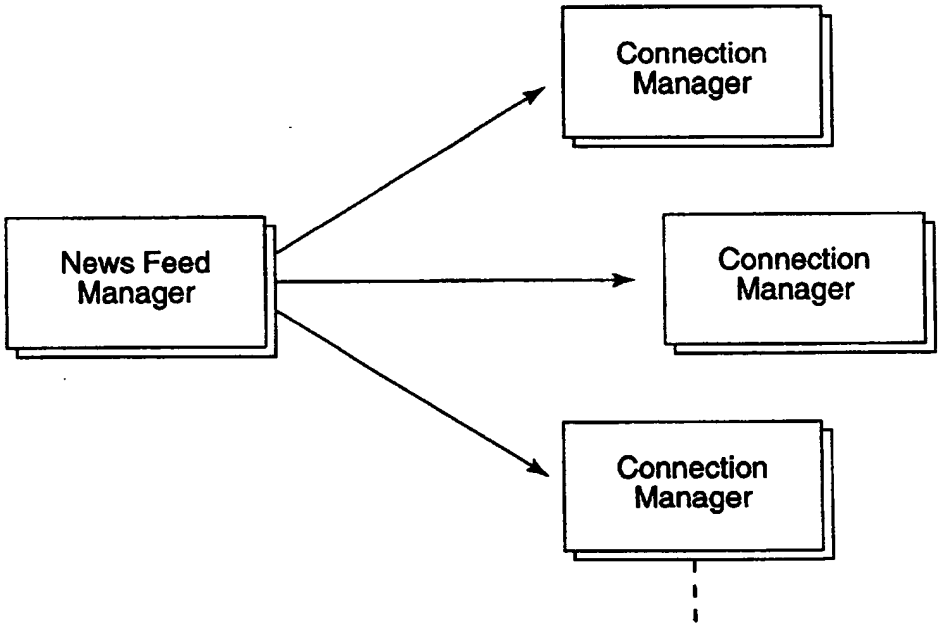


Fig. 43

Client1 Personal WebAccess Browser

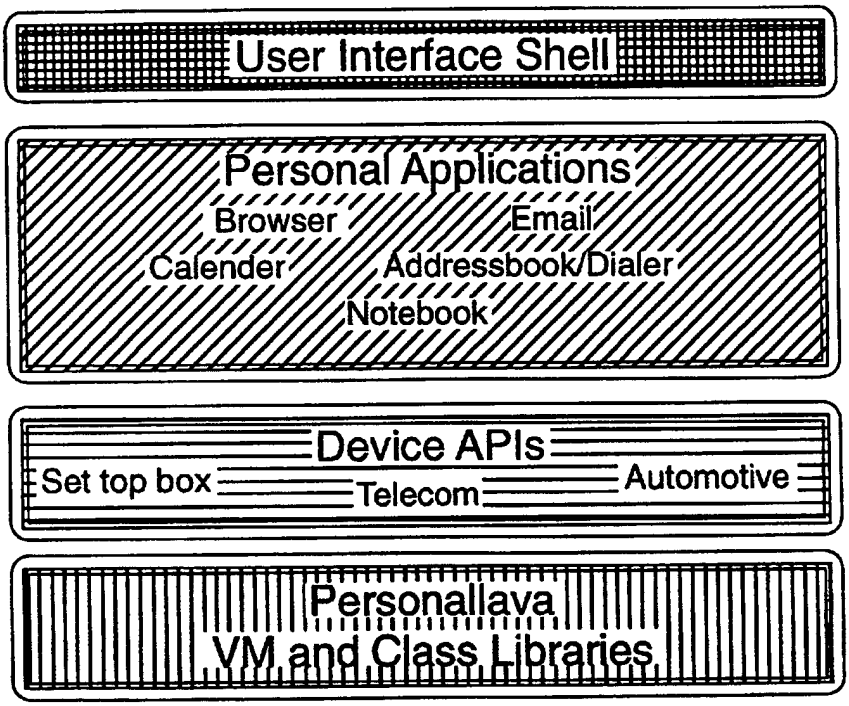


Fig. 44

Client1 Directory Services

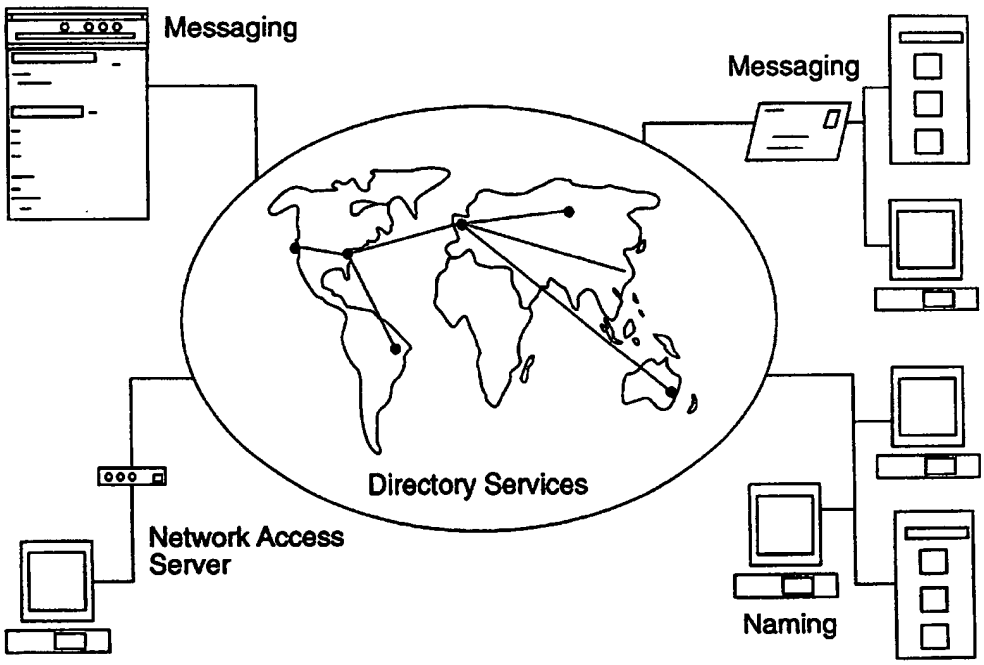


Fig. 45

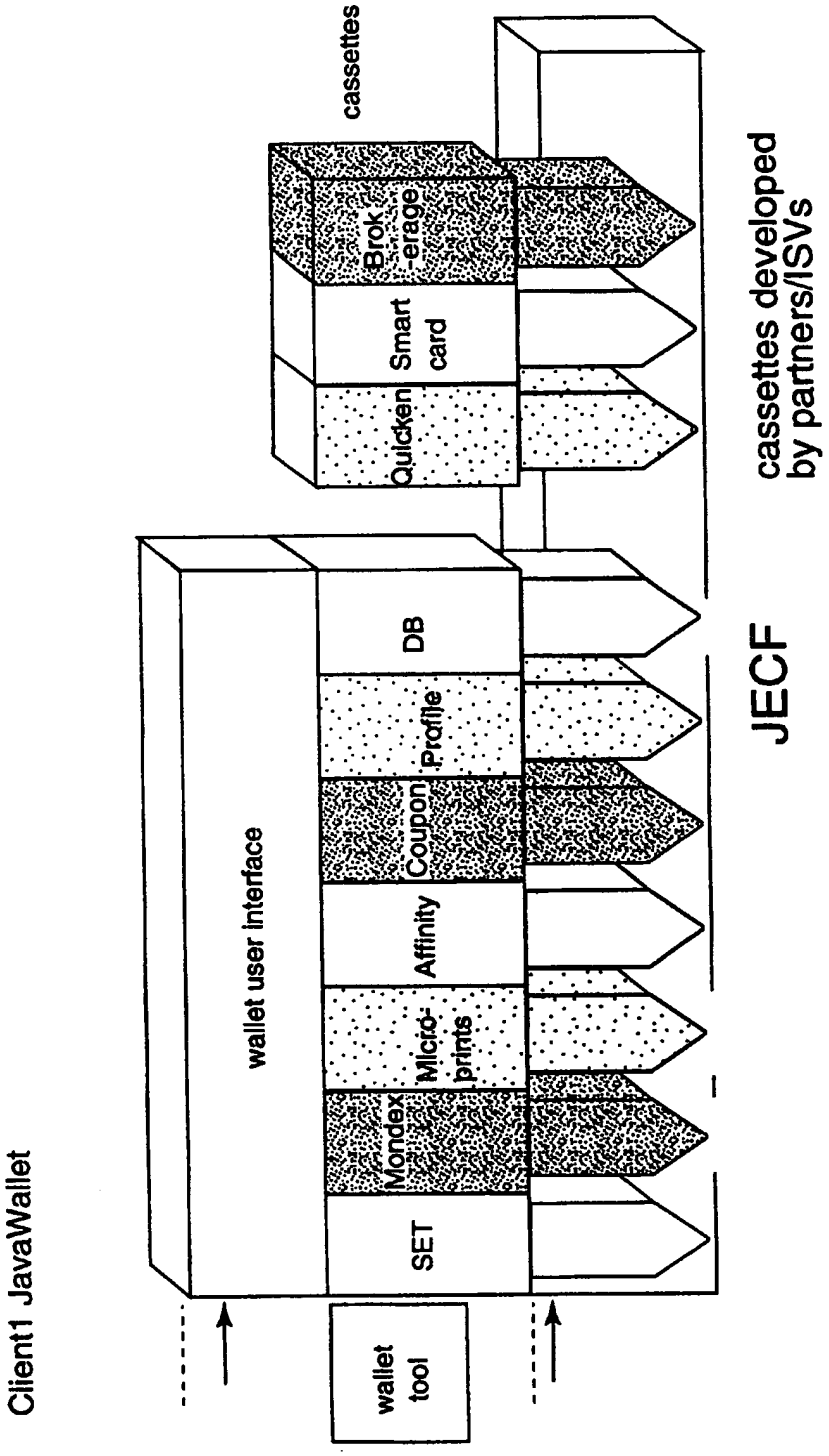

Client1 JavaWallet
wallet tool
wallet user interface
SET
Mondex
Micro-prints
Affinity
Coupon
Profile
DB
JECF
cassettes
Quicken
Smart card
Brok-erage
cassettes developed by partners/ISVs

Fig. 46

Client1Screen Product Suite

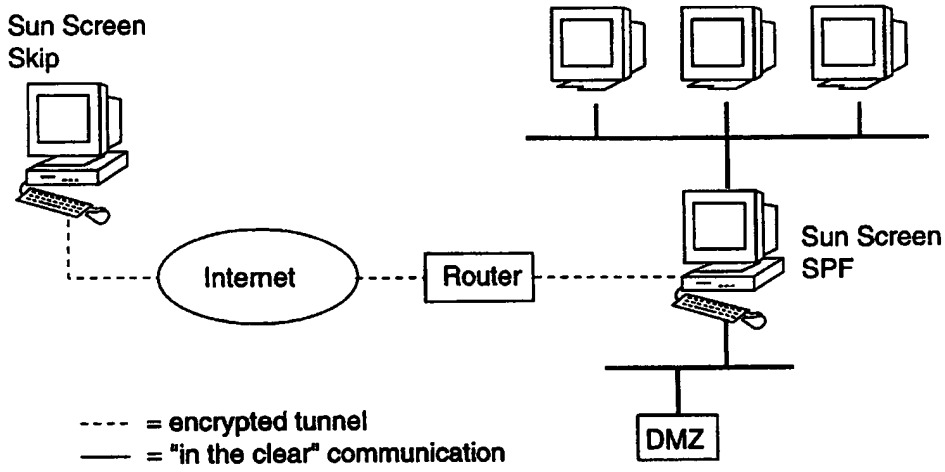


Fig. 47

Netra Internet Server Bundle

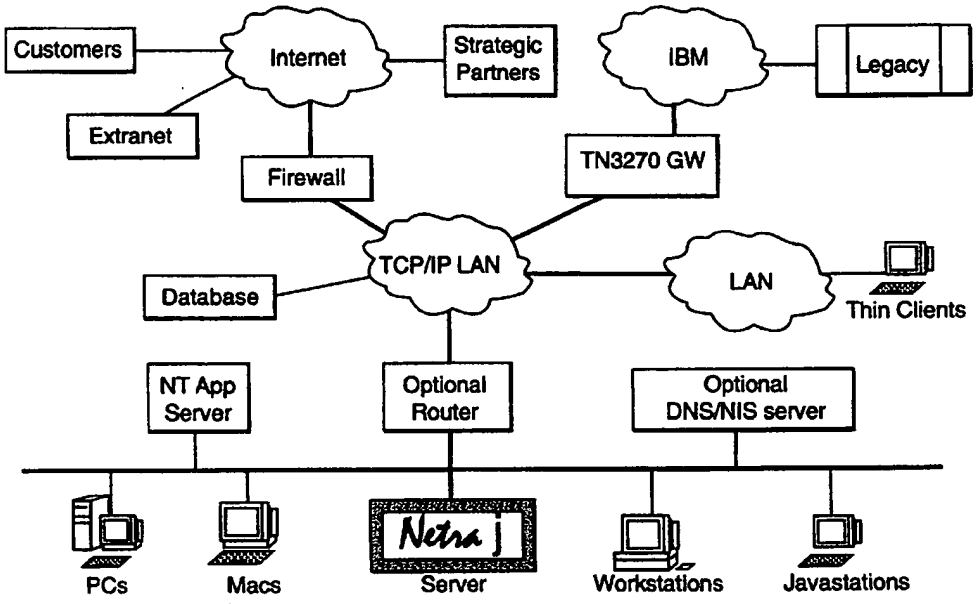


Fig. 48

Solaris ISP Server Bundle

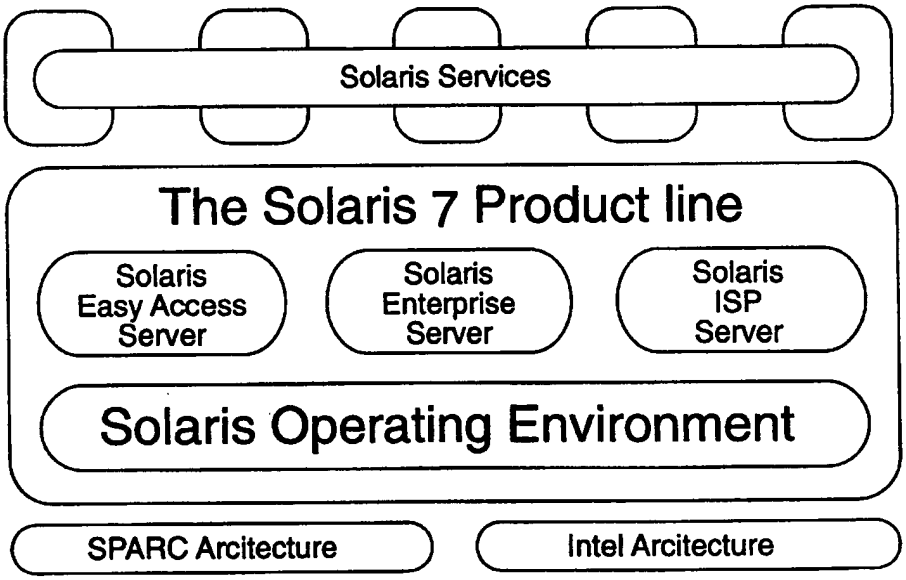


Fig. 49

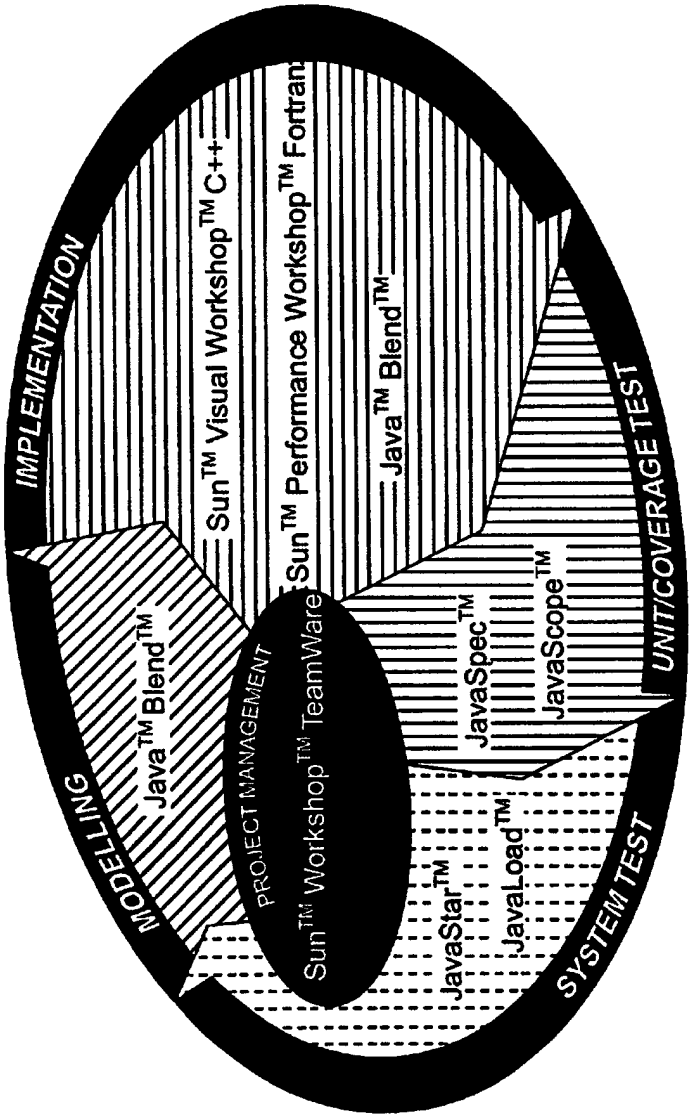

Developement & Testing Tools
IMPLEMENTATION
MODELLING
UNIT/COVERAGE TEST
SYSTEM TEST
PROJECT MANAGEMENT
Sun™ Visual Workshop™ C++
Sun™ Performance Workshop™ Fortran
Java™ Blend™
JavaSpec™
JavaScope™
JavaLoad™
JavaStar™
Sun™ Workshop™ TeamWare
Java™ Blend™

Fig. 50

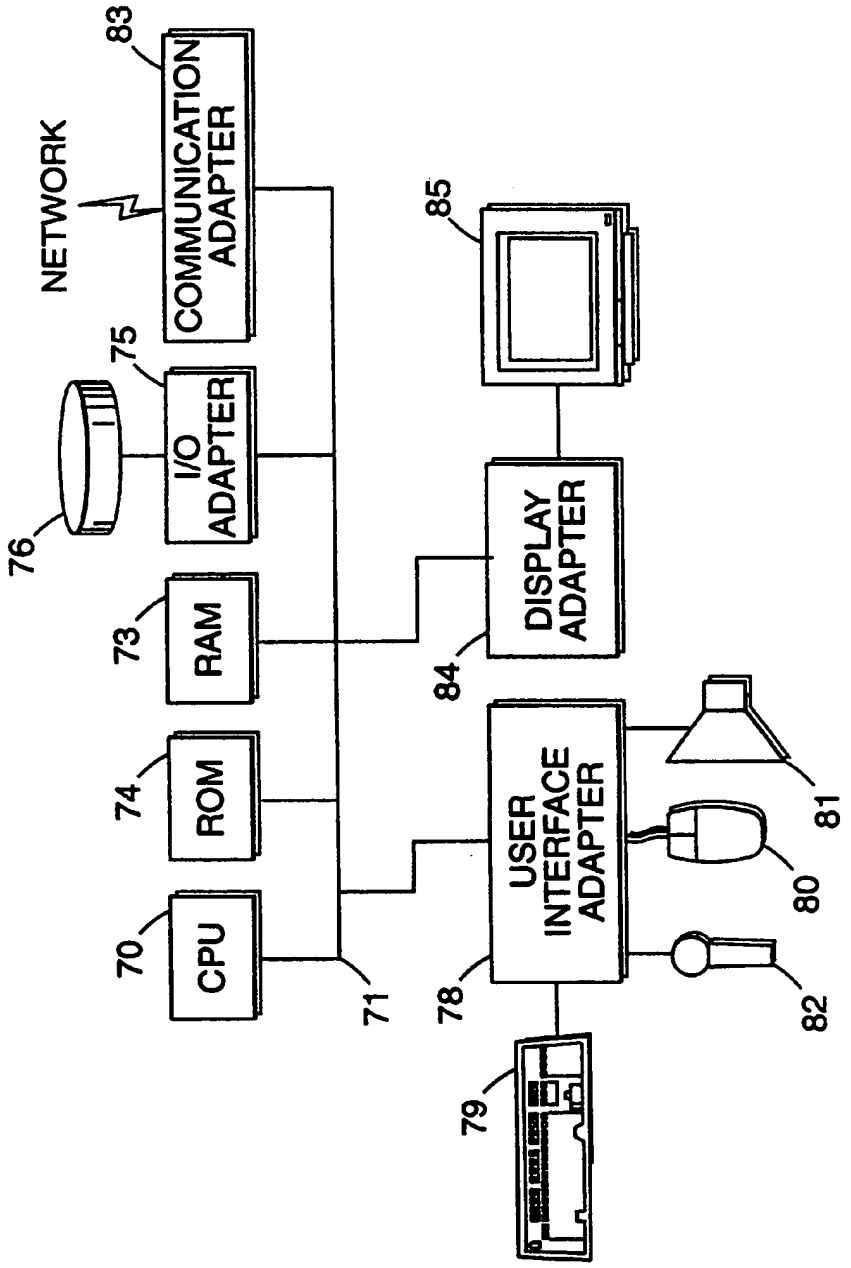

NETWORK
83
COMMUNICATION ADAPTER
75
I/O ADAPTER
76
73
RAM
74
ROM
70
CPU
71
85
DISPLAY ADAPTER
84
USER INTERFACE ADAPTER
78
81
80
82
79

Fig. 51

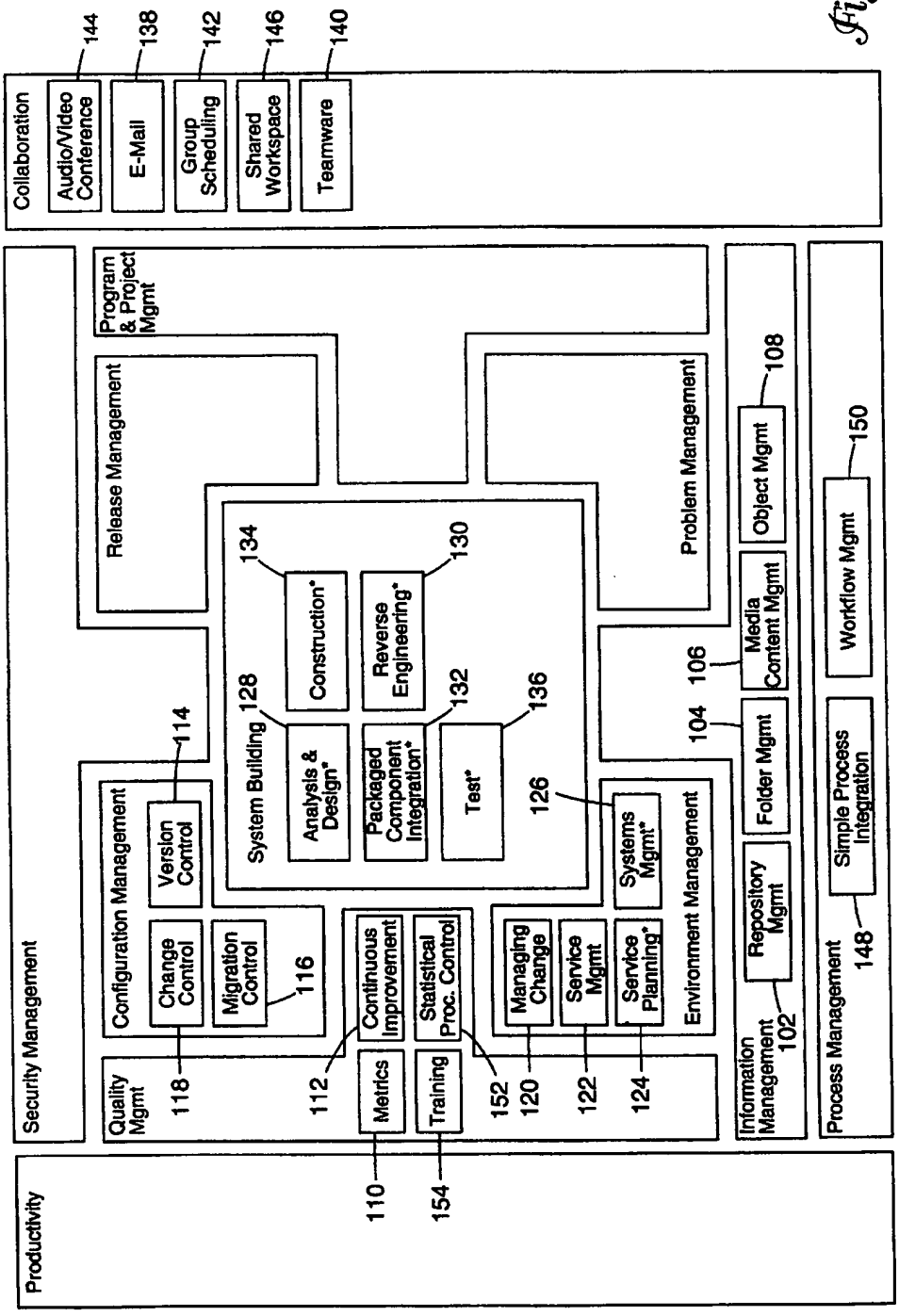

Collaboration
Audio/Video Conference
144
E-Mail
138
Group Scheduling
142
Shared Workspace
146
Teamware
140
Security Management
Program & Project Mgmt
Release Management
Problem Management
Configuration Management
Version Control
114
Change Control
Migration Control
116
System Building
128
Analysis & Design*
Construction*
134
Packaged Component Integration*
132
Reverse Engineering*
130
Test*
136
126
Systems Mgmt*
Environment Management
104
Media Content Mgmt
106
Object Mgmt
108
Folder Mgmt
Repository Mgmt
Information Management
102
Workflow Mgmt
150
Simple Process Integration
Process Management
148
Quality Mgmt
118
Continuous Improvement
Statistical Proc. Control
Managing Change
Service Mgmt
Service Planning*
Metrics
Training
112
152
120
122
124
110
154
Productivity

Fig. 52

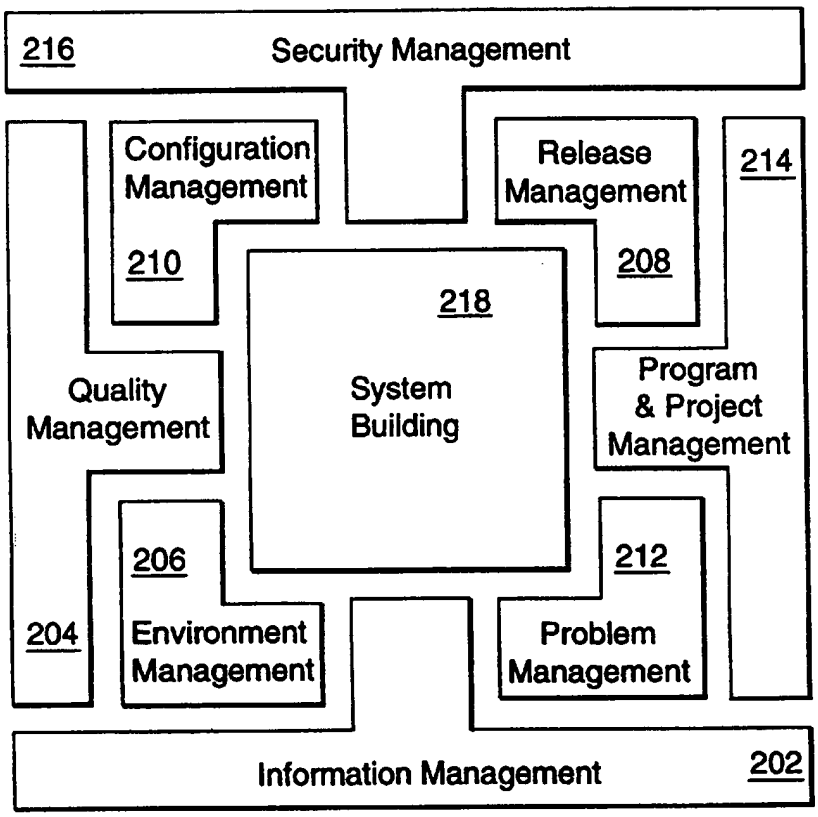

216
Security Management
Configuration Management
210
Release Management
208
214
218
System Building
Quality Management
Program & Project Management
206
212
204
Environment Management
Problem Management
Information Management
202

Fig. 53

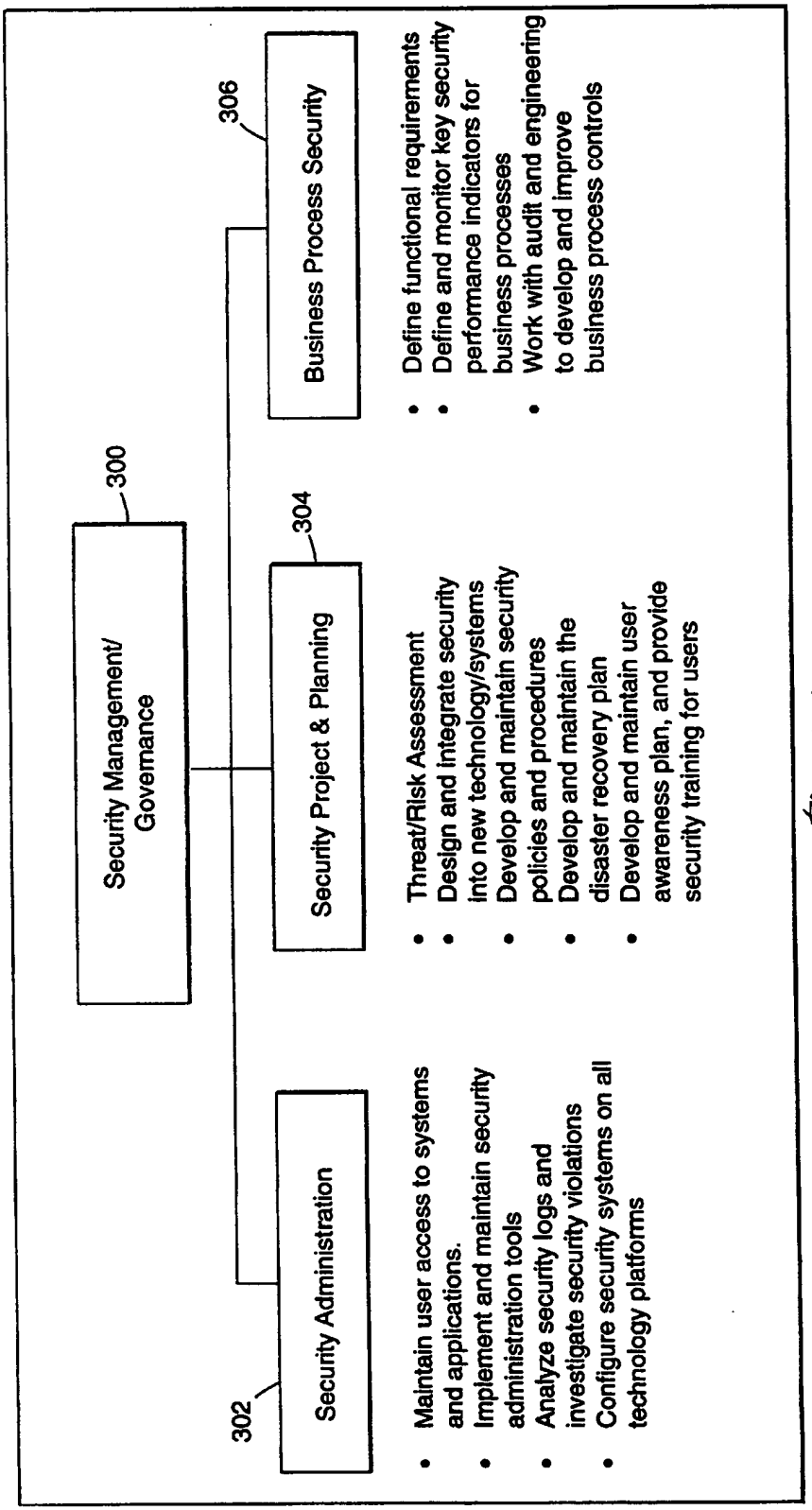

Security Management/ Governance
300
Security Project & Planning
304
Business Process Security
306
Security Administration
302
Threat/Risk Assessment
Design and integrate security into new technology/systems
Develop and maintain security policies and procedures
Develop and maintain the disaster recovery plan
Develop and maintain user awareness plan, and provide security training for users
Define functional requirements
Define and monitor key security performance indicators for business processes
Work with audit and engineering to develop and improve business process controls
Maintain user access to systems and applications.
Implement and maintain security administration tools
Analyze security logs and investigate security violations
Configure security systems on all technology platforms

Fig. 54

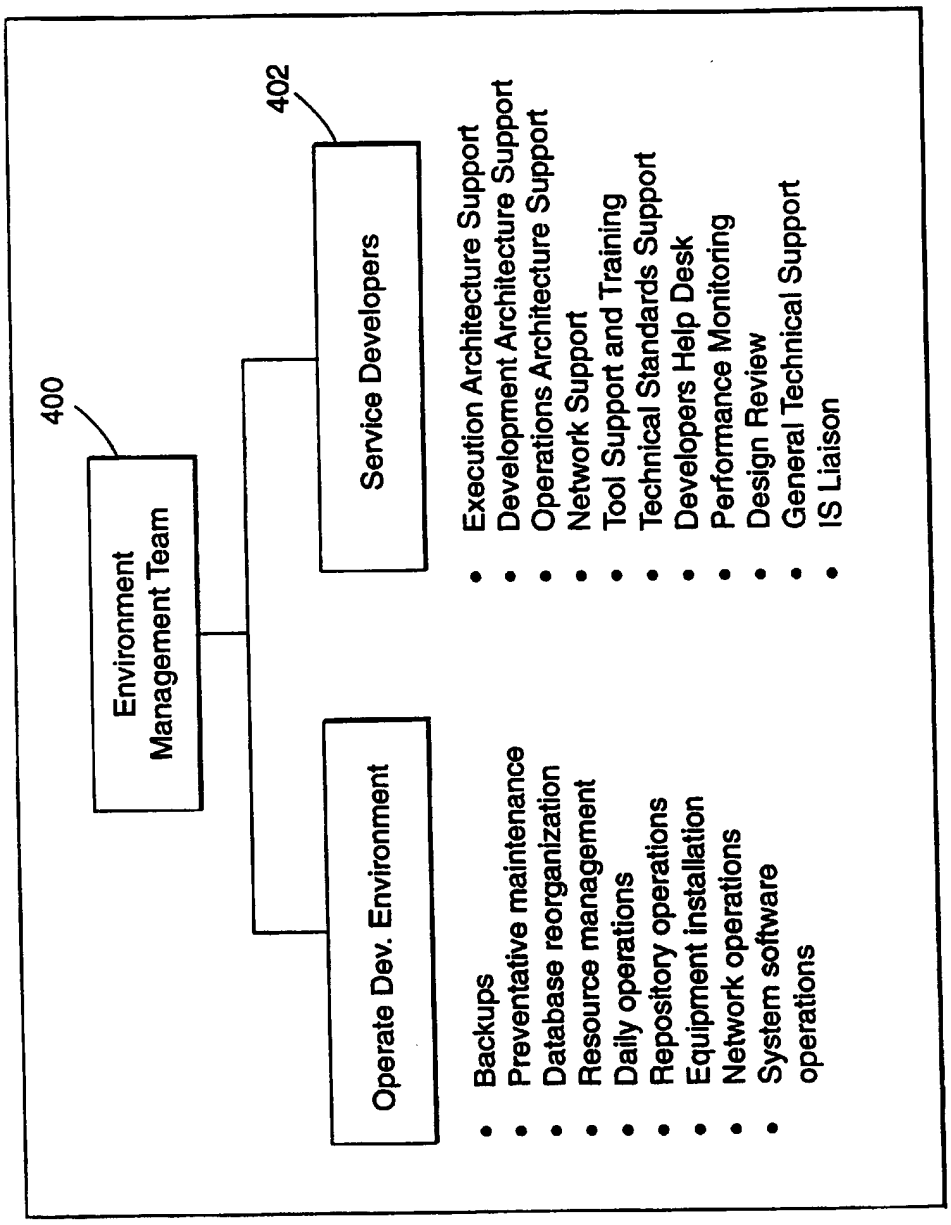

400
Environment Management Team
Operate Dev. Environment
Backups
Preventative maintenance
Database reorganization
Resource management
Daily operations
Repository operations
Equipment installation
Network operations
System software operations
402
Service Developers
Execution Architecture Support
Development Architecture Support
Operations Architecture Support
Network Support
Tool Support and Training
Technical Standards Support
Developers Help Desk
Performance Monitoring
Design Review
General Technical Support
IS Liaison

Fig. 55

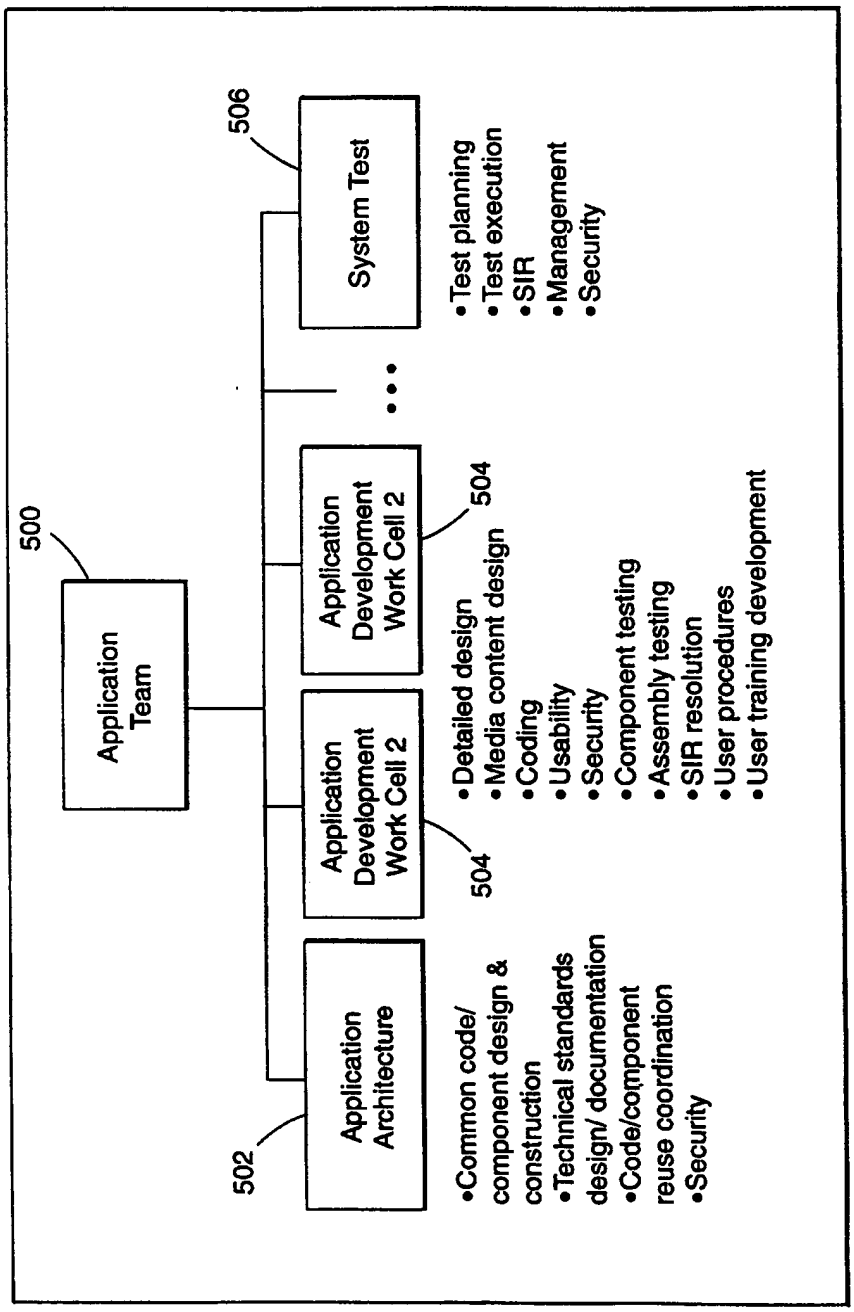

500
Application Team
502
Application Architecture
•Common code/ component design & construction
•Technical standards design/ documentation
•Code/component reuse coordination
•Security
504
Application Development Work Cell 2
•Detailed design
•Media content design
•Coding
•Usability
•Security
•Component testing
•Assembly testing
•SIR resolution
•User procedures
•User training development
504
Application Development Work Cell 2
506
System Test
•Test planning
•Test execution
•SIR
•Management
•Security

Fig. 56

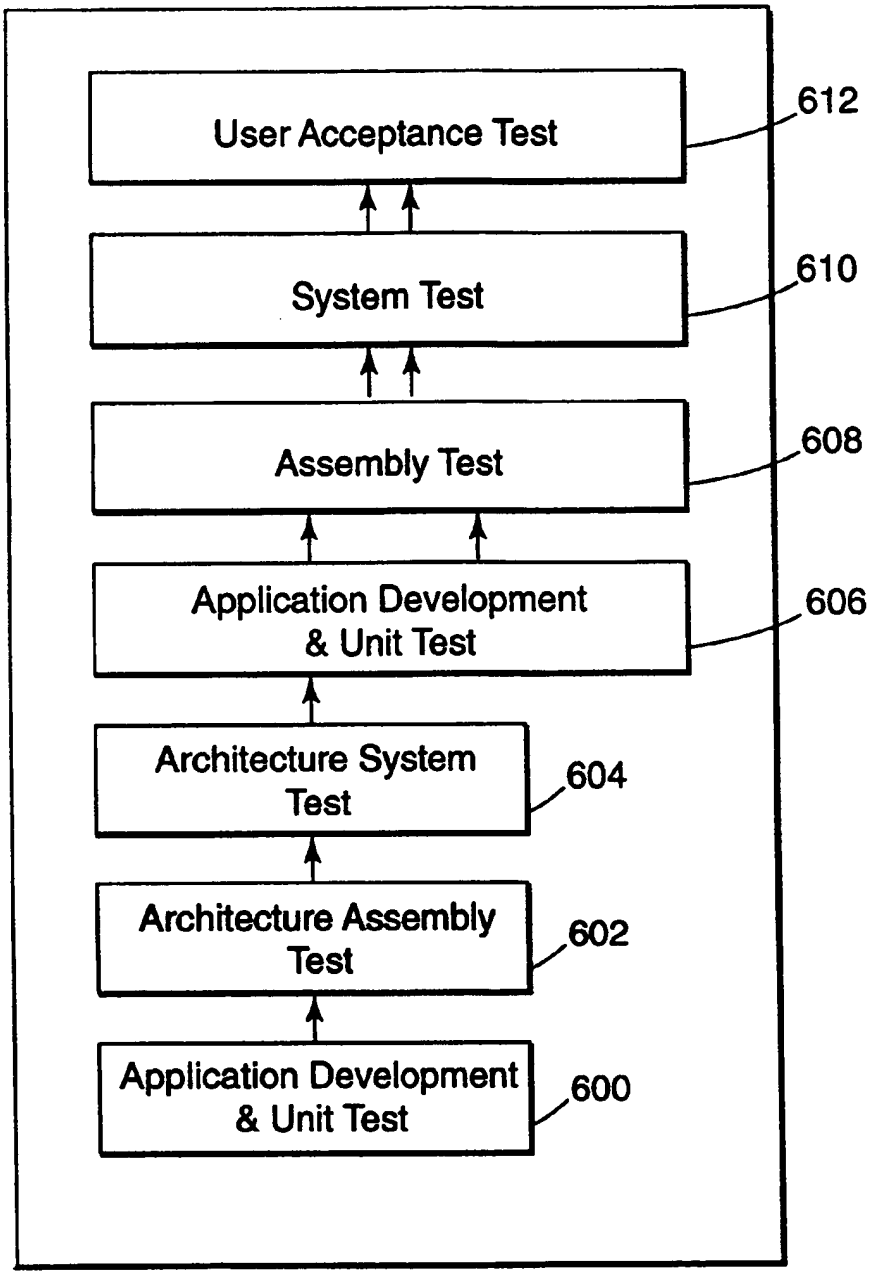

User Acceptance Test
612
System Test
610
Assembly Test
608
Application Development & Unit Test
606
Architecture System Test
604
Architecture Assembly Test
602
Application Development & Unit Test
600

Fig. 57

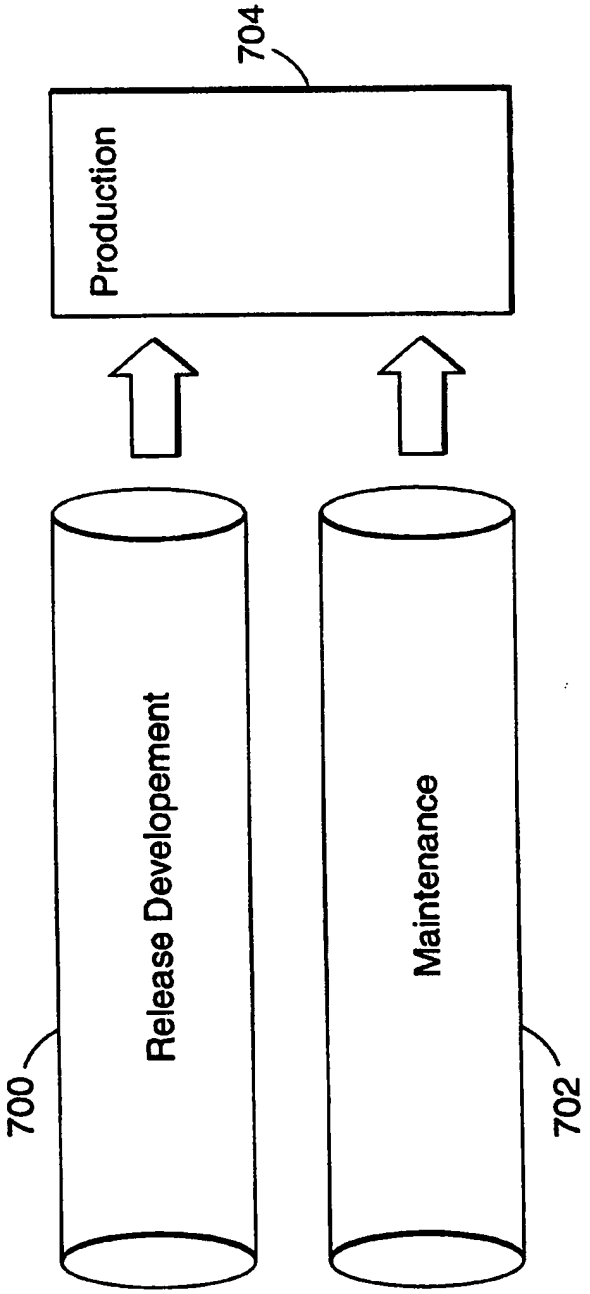


Fig. 58

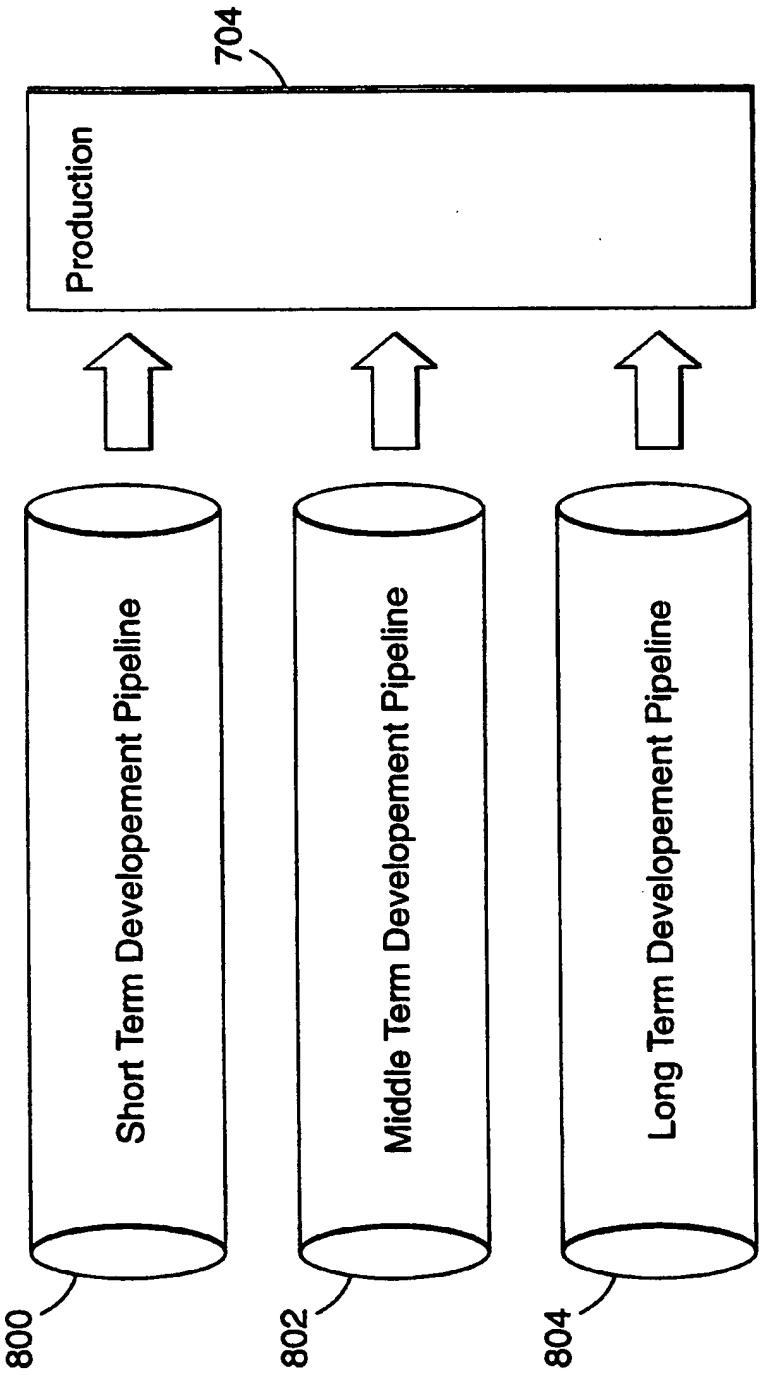

704
Production
Short Term Developement Pipeline
Middle Term Developement Pipeline
Long Term Developement Pipeline
800
802
804

Fig. 59

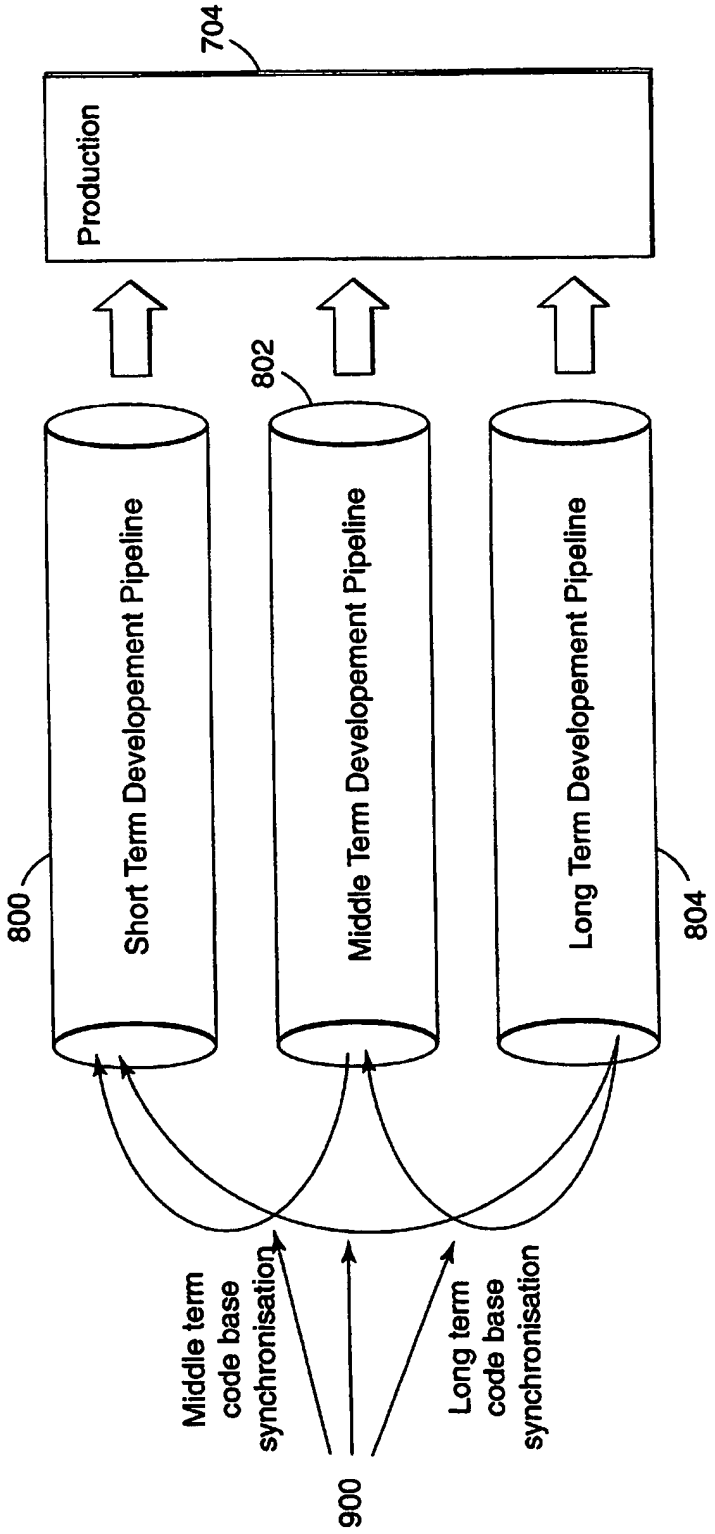

704
Production
802
800
Short Term Developement Pipeline
Middle Term Developement Pipeline
Long Term Developement Pipeline
804
Middle term code base synchronisation
900
Long term code base synchronisation

Fig. 60

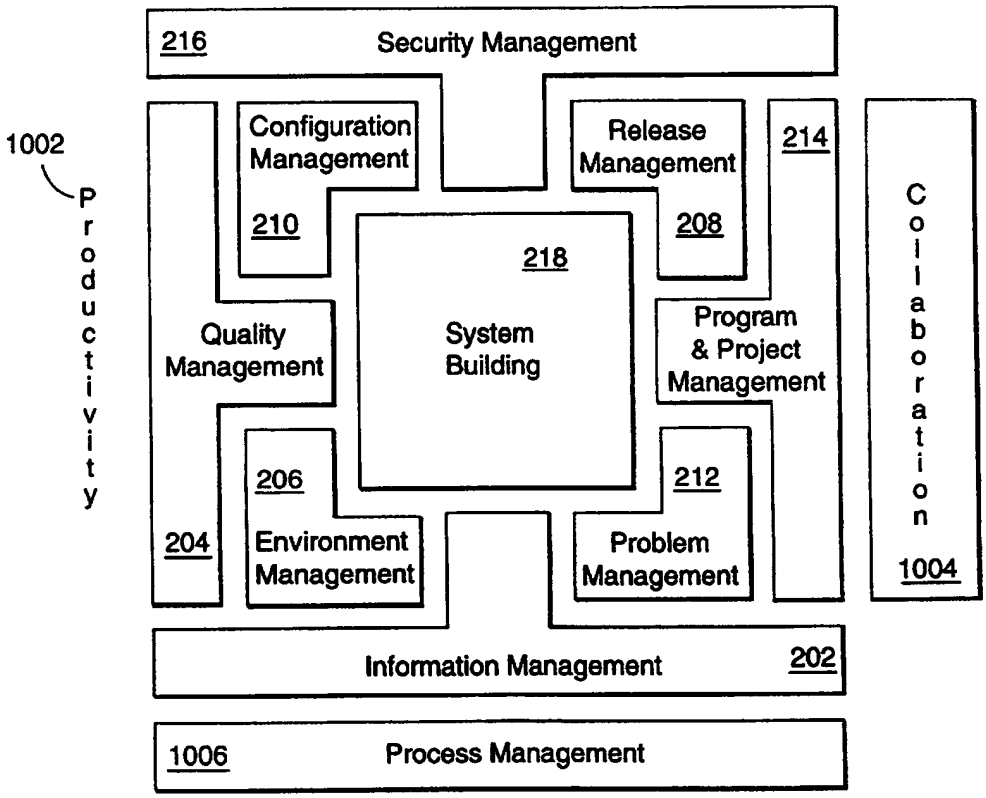

216
Security Management
1002
Productivity
Configuration Management
210
Release Management
208
214
218
System Building
Quality Management
Program & Project Management
206
Environment Management
204
212
Problem Management
Collaboration
1004
Information Management
202
1006
Process Management

Fig. 61

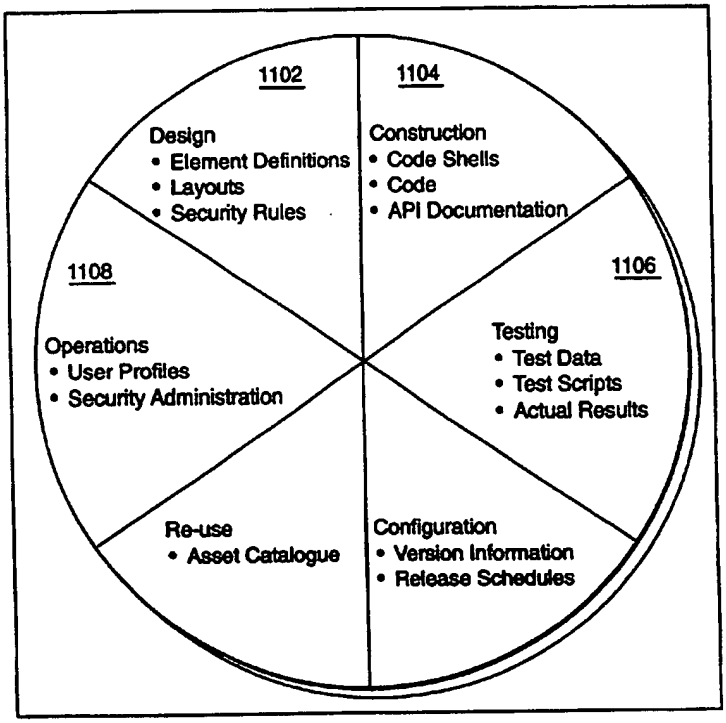

1102
Design
• Element Definitions
• Layouts
• Security Rules
1104
Construction
• Code Shells
• Code
• API Documentation
1106
Testing
• Test Data
• Test Scripts
• Actual Results
1108
Operations
• User Profiles
• Security Administration
Re-use
• Asset Catalogue
Configuration
• Version Information
• Release Schedules

Fig. 62

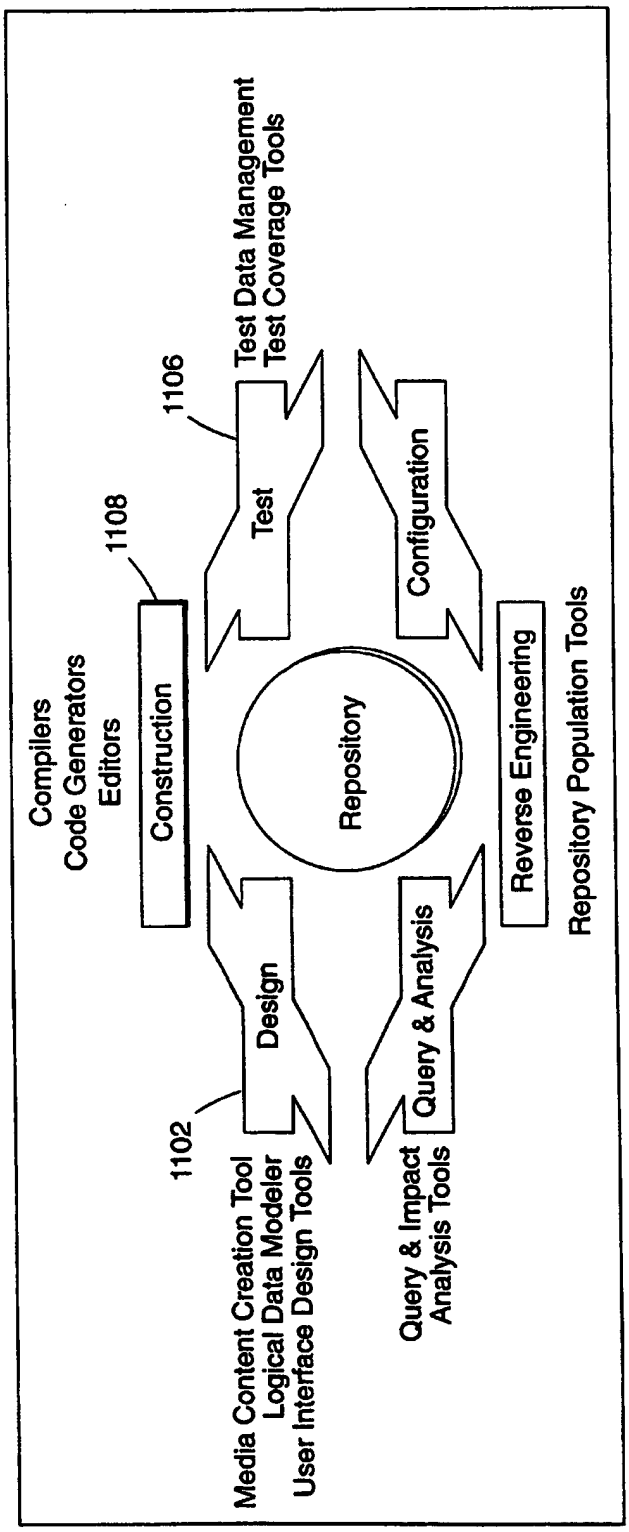

1102
Design
Media Content Creation Tool
Logical Data Modeler
User Interface Design Tools
1108
Construction
Compilers
Code Generators
Editors
1106
Test
Test Data Management
Test Coverage Tools
Repository
Query & Analysis
Query & Impact
Analysis Tools
Configuration
Reverse Engineering
Repository Population Tools

Fig. 63

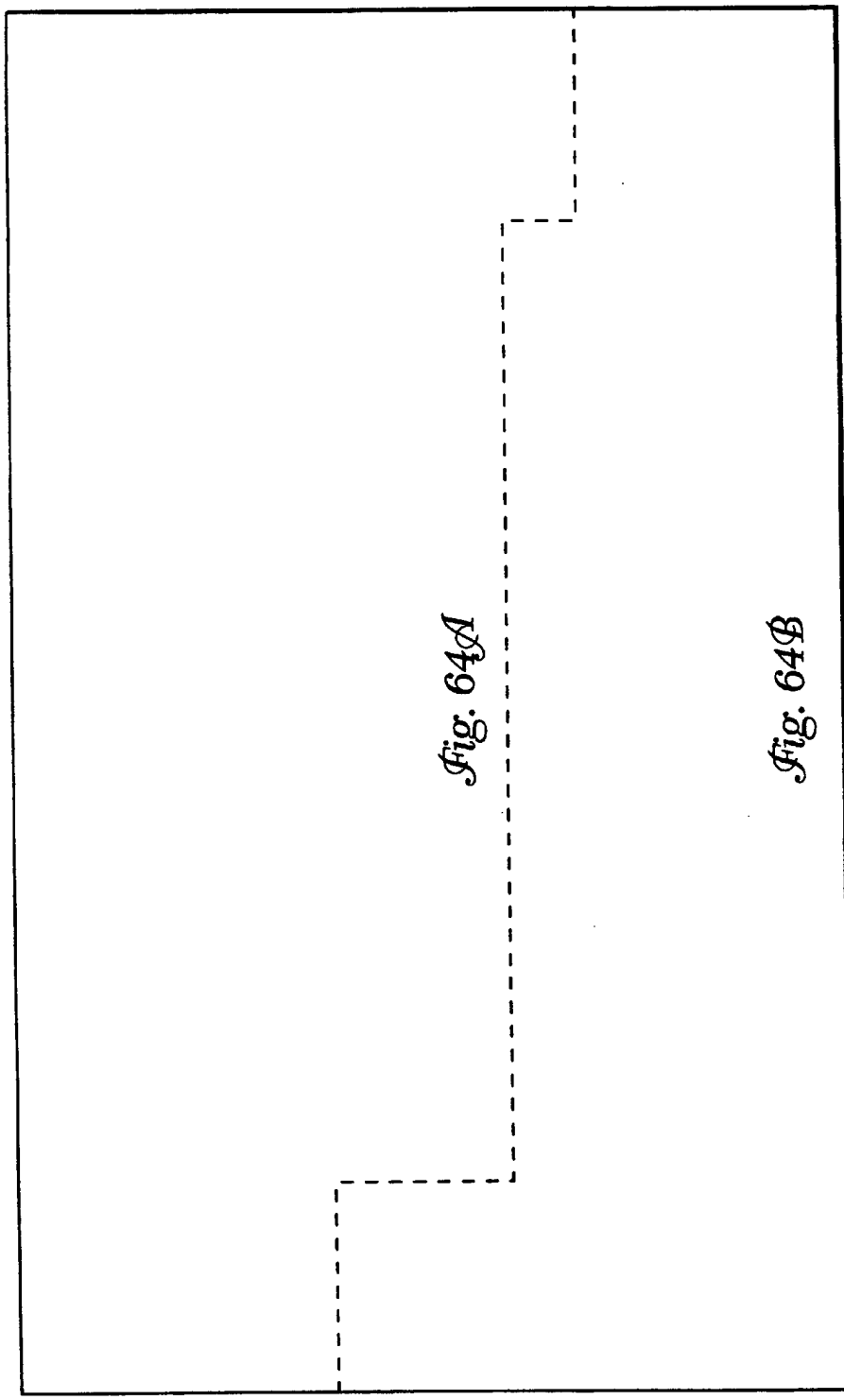


Fig. 64

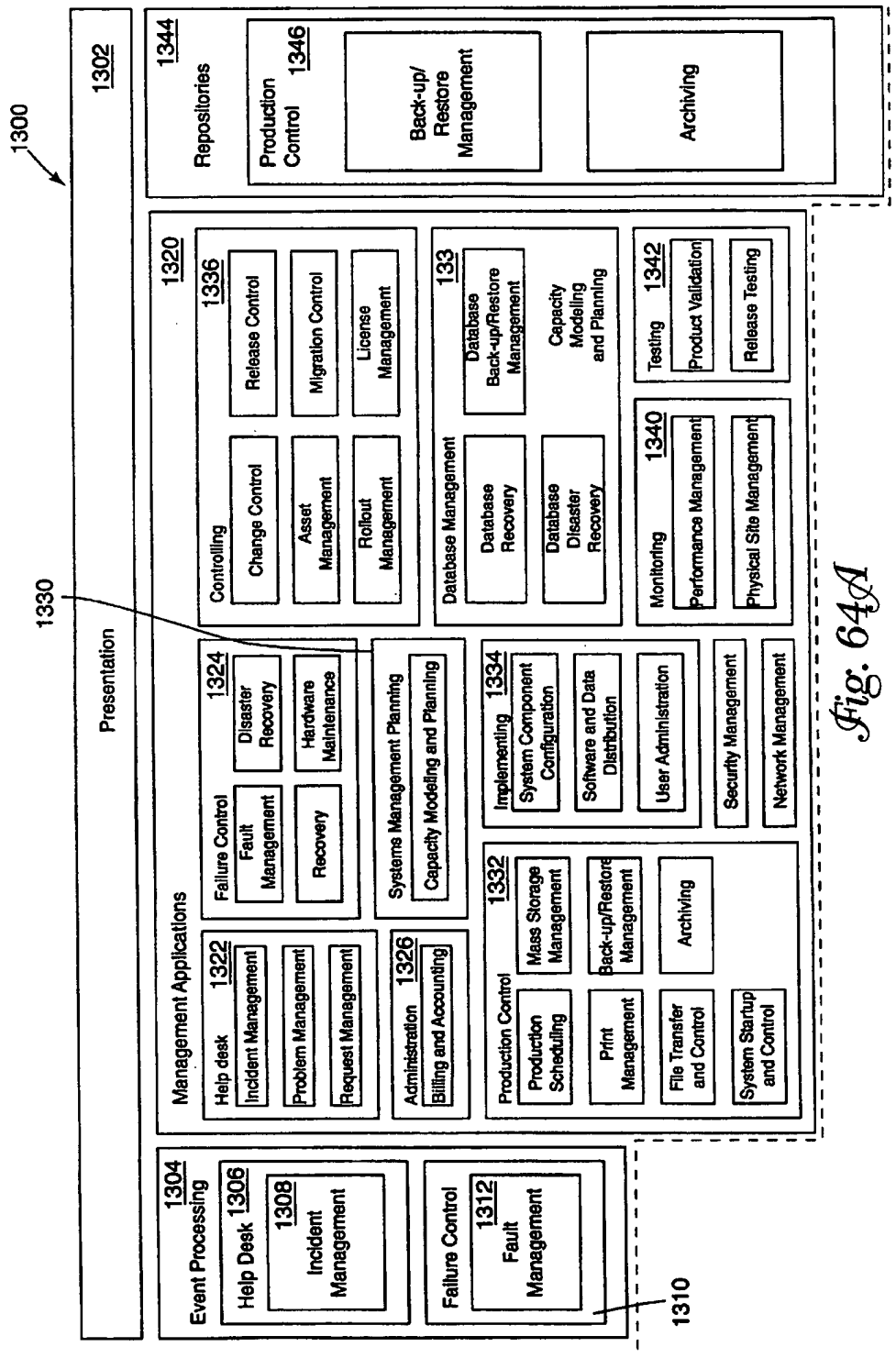

1300
1302
Presentation
1330
1344
Repositories
Production Control 1346
Back-up/ Restore Management
Archiving
1320
Management Applications
Controlling 1336
Change Control
Release Control
Asset Management
Migration Control
Rollout Management
License Management
Database Management 133
Database Recovery
Database Disaster Recovery
Database Back-up/Restore Management
Capacity Modeling and Planning
Monitoring 1340
Performance Management
Physical Site Management
Testing 1342
Product Validation
Release Testing
Failure Control 1324
Fault Management
Recovery
Disaster Recovery
Hardware Maintenance
Systems Management Planning
Capacity Modeling and Planning
Implementing 1334
System Component Configuration
Software and Data Distribution
User Administration
Security Management
Network Management
Help desk 1322
Incident Management
Problem Management
Request Management
Administration 1326
Billing and Accounting
Production Control 1332
Production Scheduling
Mass Storage Management
Print Management
Back-up/Restore Management
File Transfer and Control
Archiving
System Startup and Control
1304
Event Processing
Help Desk 1306
1308
Incident Management
Failure Control
1312
Fault Management
1310

Fig. 64A

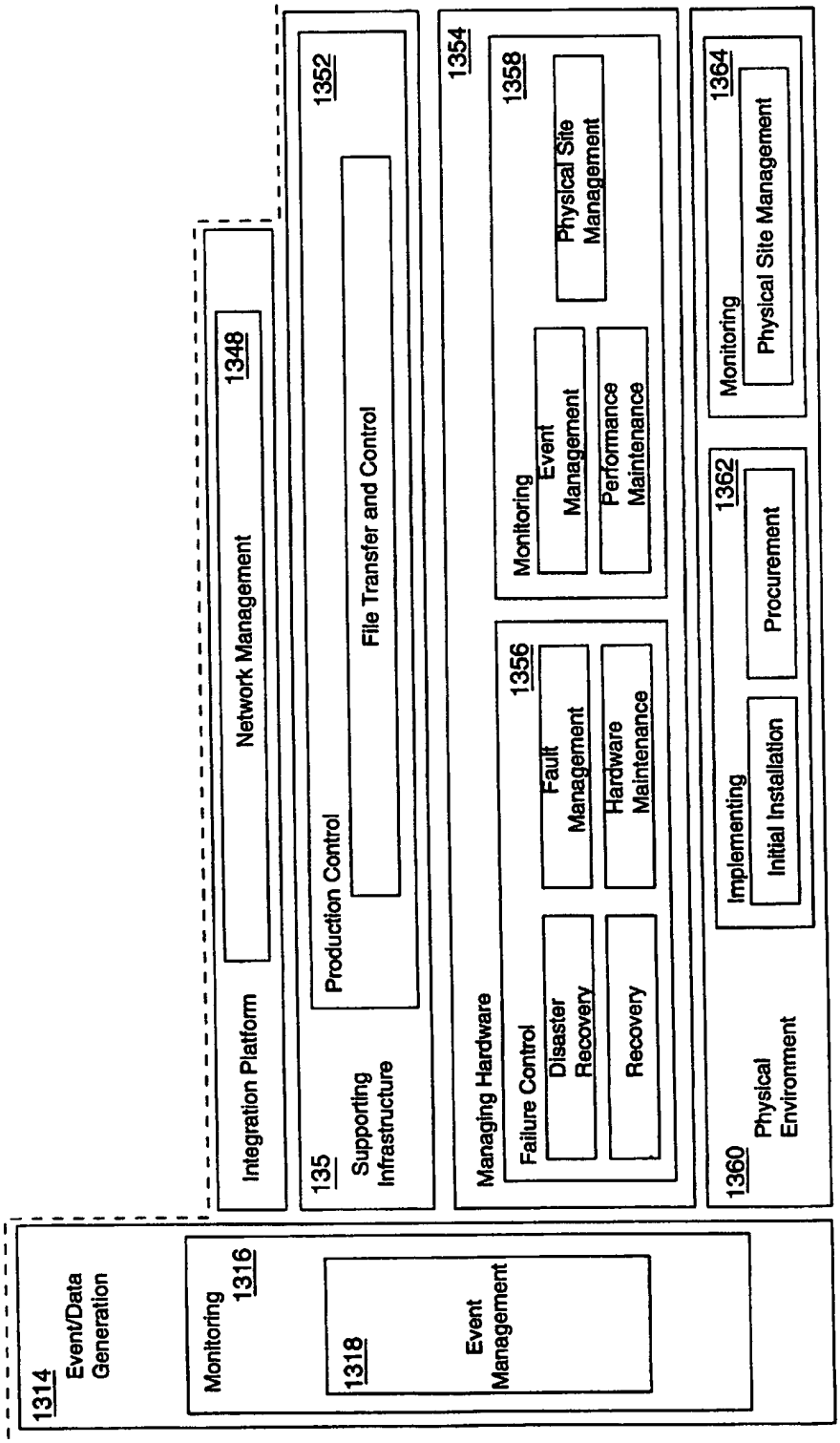

1314
Event/Data Generation
Monitoring
1316
1318
Event Management
Integration Platform
1348
Network Management
135
Supporting Infrastructure
Production Control
File Transfer and Control
1352
Managing Hardware
1354
Failure Control
1356
Disaster Recovery
Recovery
Fault Management
Hardware Maintenance
Monitoring
1358
Event Management
Performance Maintenance
Physical Site Management
1360
Physical Environment
Implementing
1362
Initial Installation
Procurement
Monitoring
1364
Physical Site Management

Fig. 64B

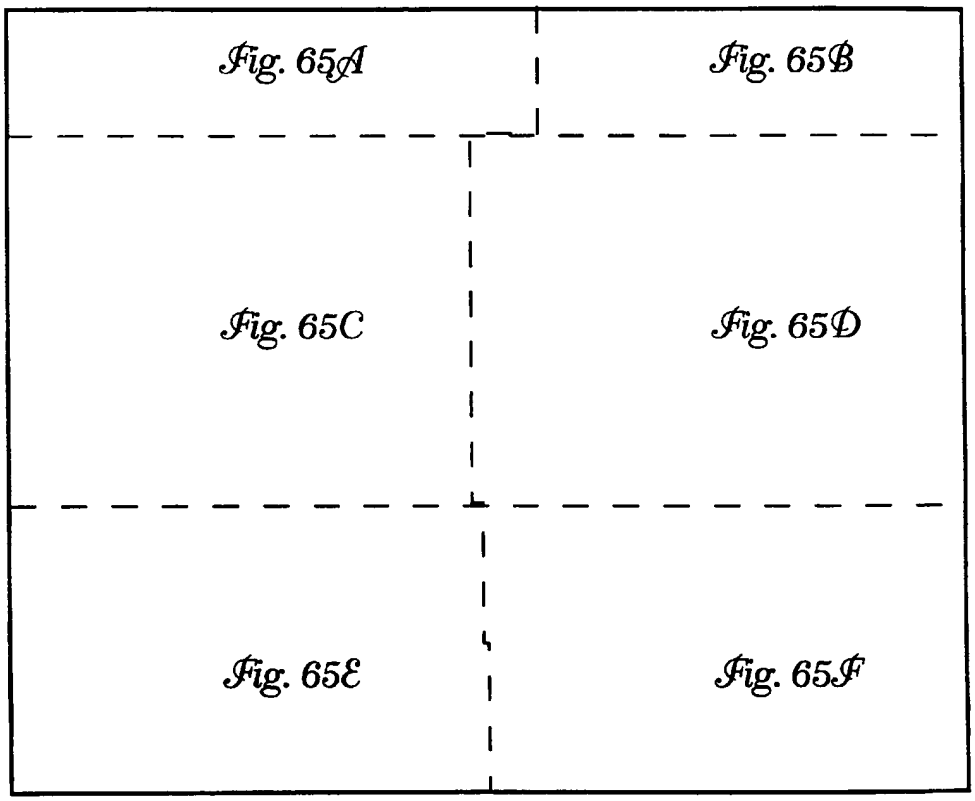


Fig. 65

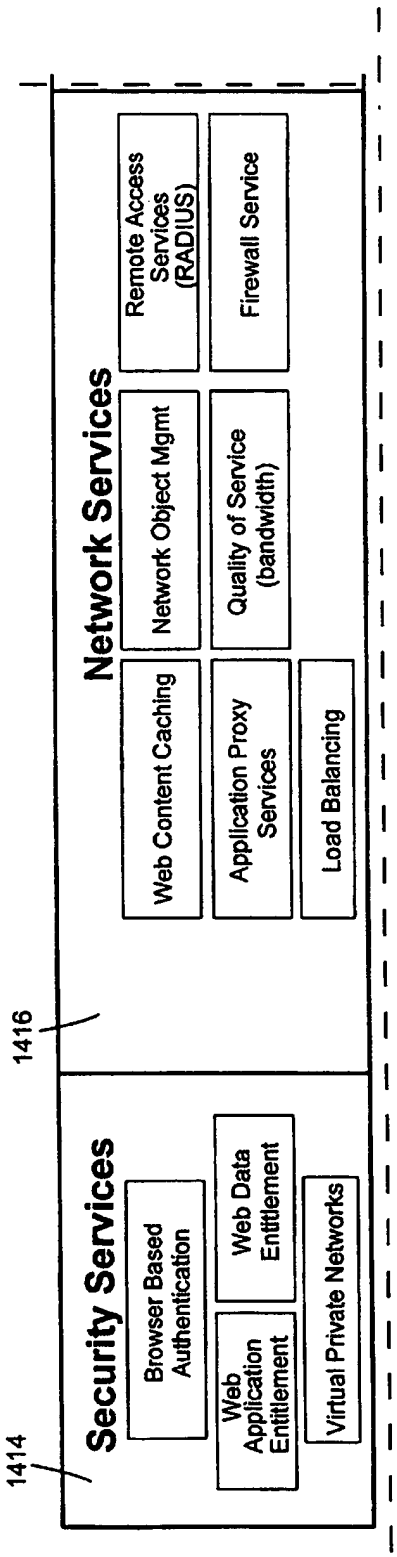

Network Services
Remote Access Services (RADIUS)
Firewall Service
Network Object Mgmt
Quality of Service (bandwidth)
Web Content Caching
Application Proxy Services
Load Balancing
1416
Security Services
Browser Based Authentication
Web Data Entitlement
Web Application Entitlement
Virtual Private Networks
1414

Fig. 65A

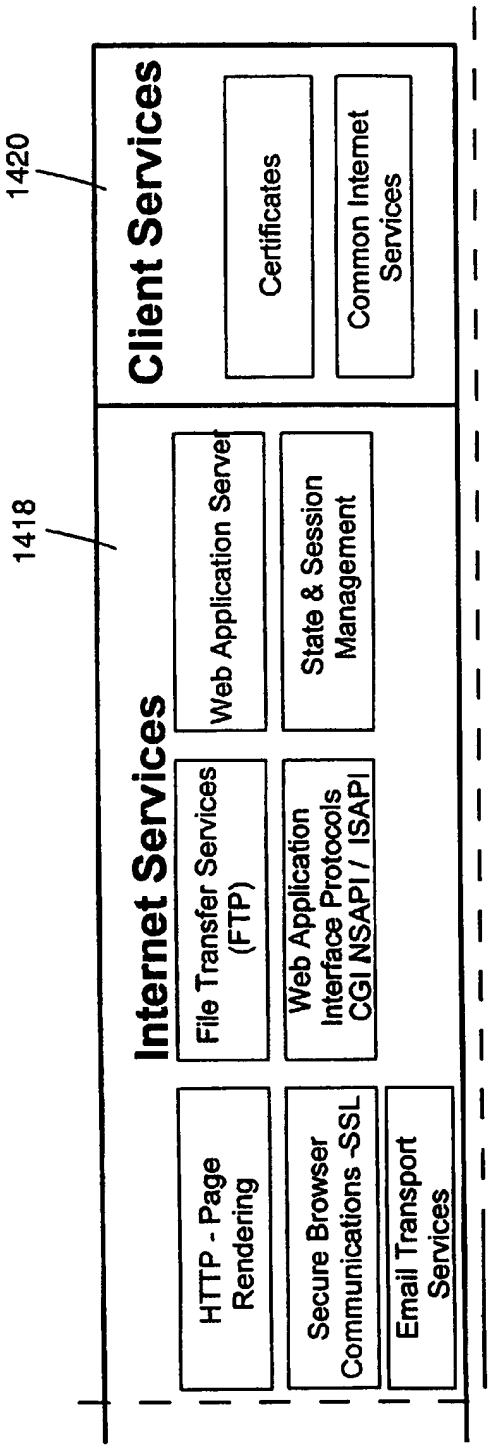

1420
Client Services
Certificates
Common Internet Services
1418
Internet Services
Web Application Server
State & Session Management
File Transfer Services (FTP)
Web Application Interface Protocols CGI NSAPI / ISAPI
HTTP - Page Rendering
Secure Browser Communications -SSL
Email Transport Services

Fig. 65B

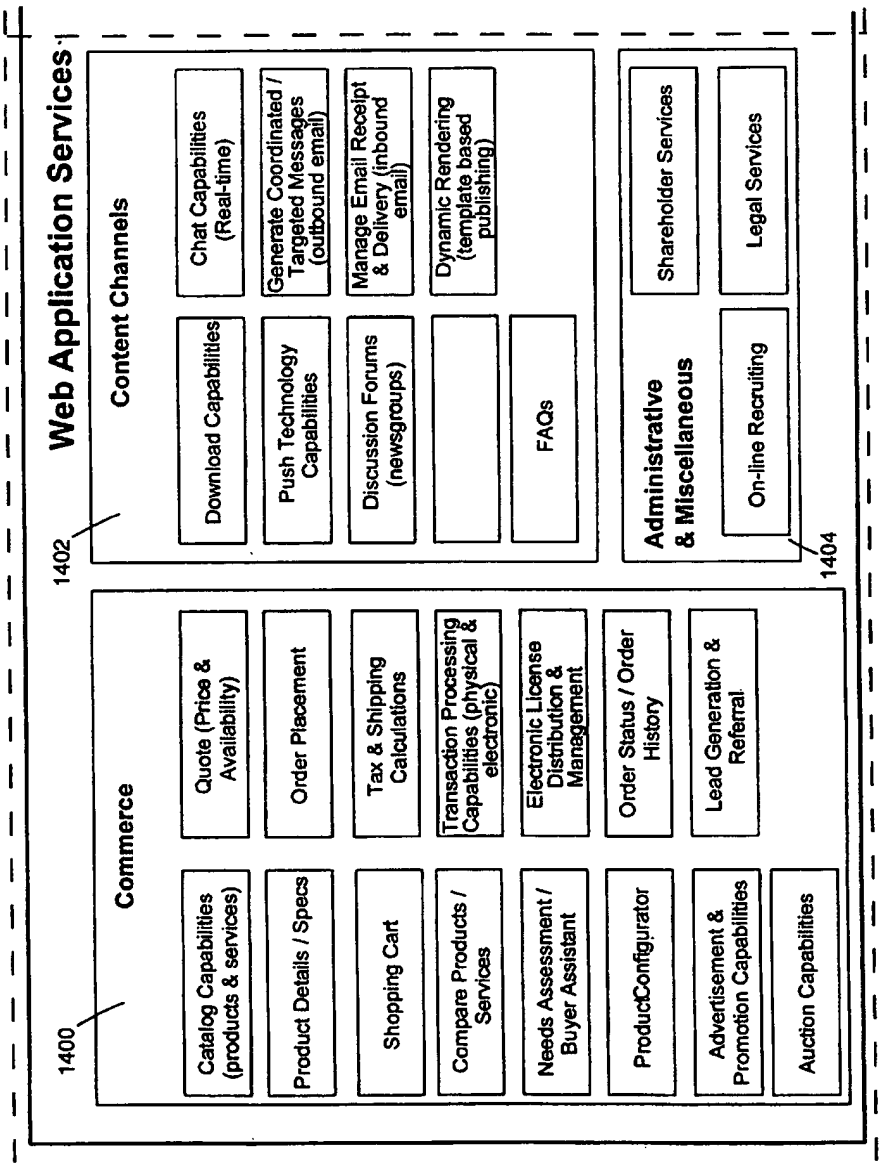

Web Application Services
1400
Commerce
Catalog Capabilities (products & services)
Quote (Price & Availability)
Product Details / Specs
Order Placement
Shopping Cart
Tax & Shipping Calculations
Compare Products / Services
Transaction Processing Capabilities (physical & electronic)
Needs Assessment / Buyer Assistant
Electronic License Distribution & Management
ProductConfigurator
Order Status / Order History
Advertisement & Promotion Capabilities
Lead Generation & Referral
Auction Capabilities
1402
Content Channels
Download Capabilities
Chat Capabilities (Real-time)
Push Technology Capabilities
Generate Coordinated / Targeted Messages (outbound email)
Discussion Forums (newsgroups)
Manage Email Receipt & Delivery (inbound email)
Dynamic Rendering (template based publishing)
FAQs
1404
Administrative & Miscellaneous
Shareholder Services
On-line Recruiting
Legal Services

Fig. 65C

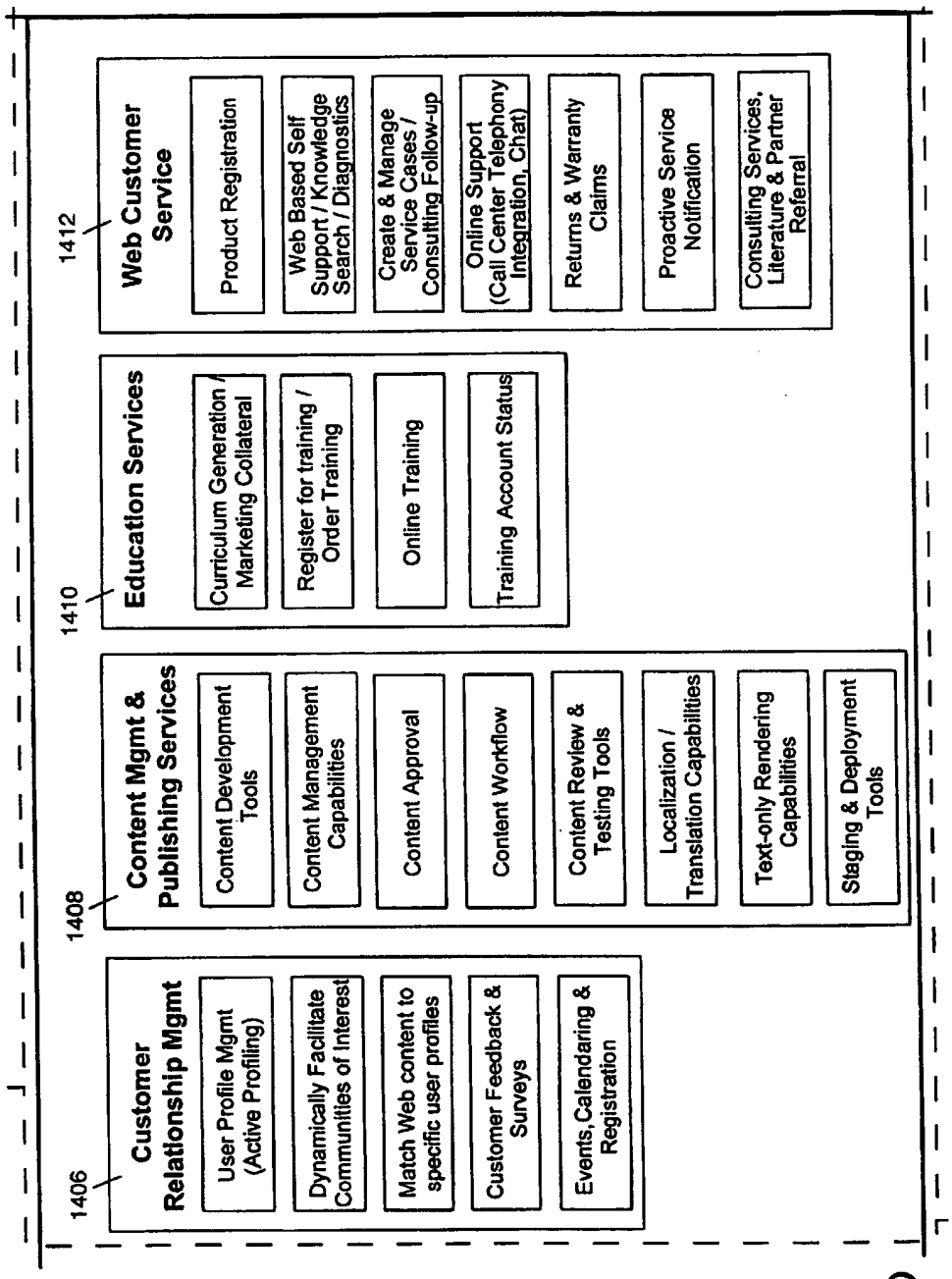

1406
Customer Relationship Mgmt
User Profile Mgmt (Active Profiling)
Dynamically Facilitate Communities of Interest
Match Web content to specific user profiles
Customer Feedback & Surveys
Events, Calendaring & Registration
1408
Content Mgmt & Publishing Services
Content Development Tools
Content Management Capabilities
Content Approval
Content Workflow
Content Review & Testing Tools
Localization / Translation Capabilities
Text-only Rendering Capabilities
Staging & Deployment Tools
1410
Education Services
Curriculum Generation / Marketing Collateral
Register for training / Order Training
Online Training
Training Account Status
1412
Web Customer Service
Product Registration
Web Based Self Support / Knowledge Search / Diagnostics
Create & Manage Service Cases / Consulting Follow-up
Online Support (Call Center Telephony Integration, Chat)
Returns & Warranty Claims
Proactive Service Notification
Consulting Services, Literature & Partner Referral

Fig. 65D

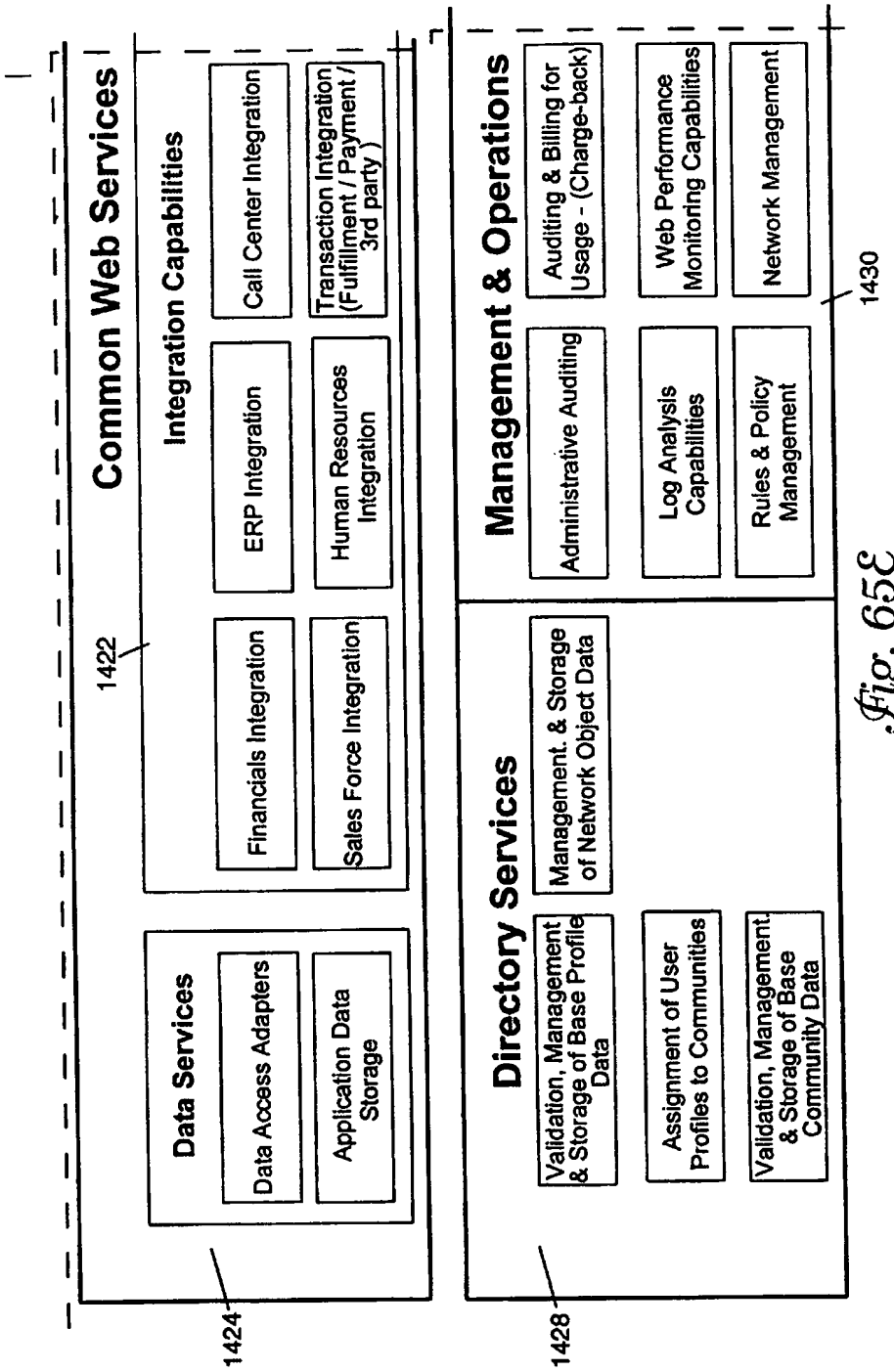

Common Web Services
1422
Integration Capabilities
Call Center Integration
Transaction Integration (Fulfillment / Payment / 3rd party)
ERP Integration
Human Resources Integration
Financials Integration
Sales Force Integration
Data Services
Data Access Adapters
Application Data Storage
1424
Management & Operations
Auditing & Billing for Usage - (Charge-back)
Web Performance Monitoring Capabilities
Administrative Auditing
Log Analysis Capabilities
Network Management
Rules & Policy Management
1430
Directory Services
Management. & Storage of Network Object Data
Validation, Management & Storage of Base Profile Data
Assignment of User Profiles to Communities
Validation, Management & Storage of Base Community Data
1428

Fig. 65E

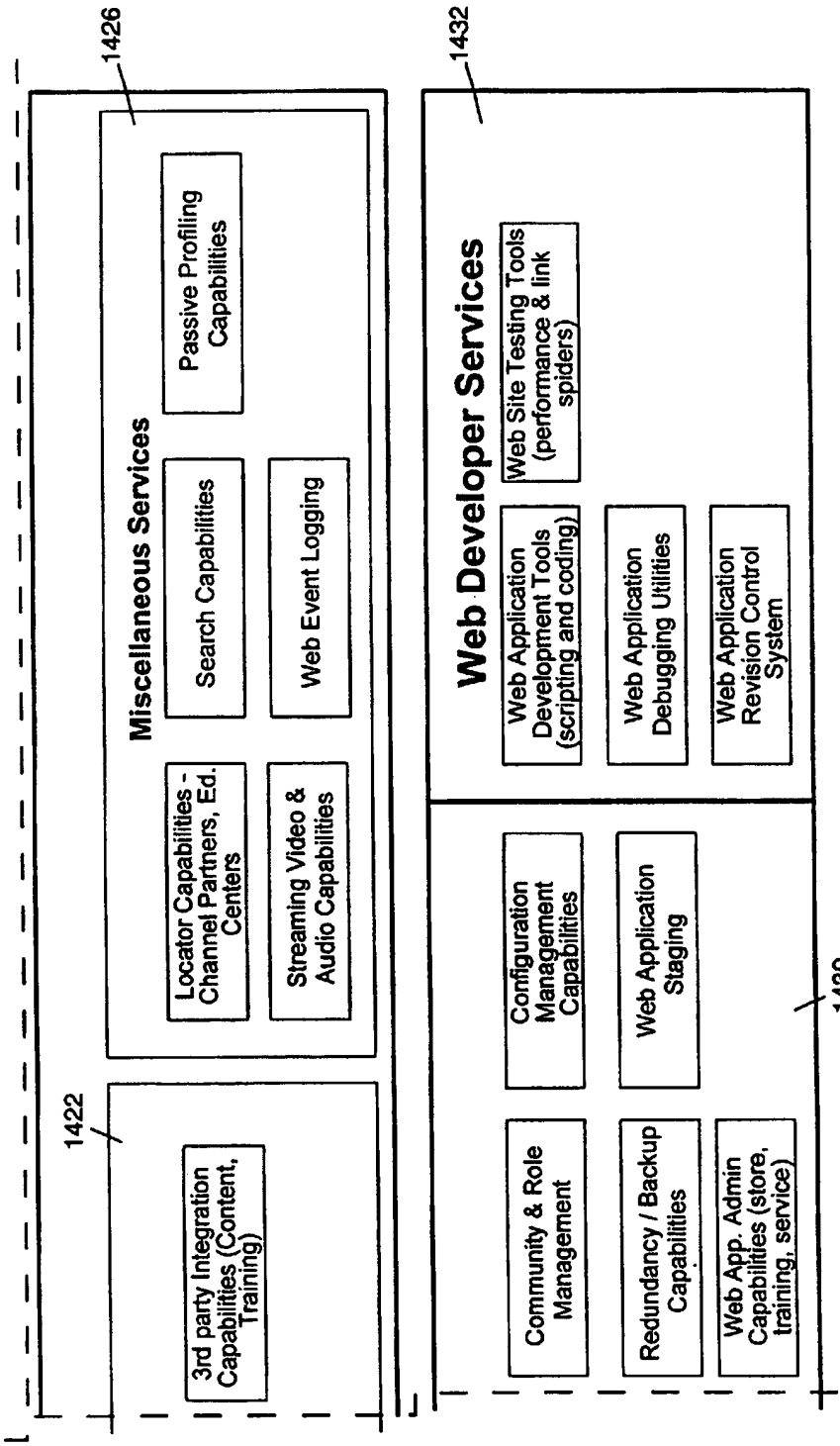

1426
1432
Miscellaneous Services
Passive Profiling Capabilities
Search Capabilities
Web Event Logging
Locator Capabilities - Channel Partners, Ed. Centers
Streaming Video & Audio Capabilities
Web Developer Services
Web Site Testing Tools (performance & link spiders)
Web Application Development Tools (scripting and coding)
Web Application Debugging Utilities
Web Application Revision Control System
1422
3rd party Integration Capabilities (Content, Training)
Configuration Management Capabilities
Web Application Staging
1430
Community & Role Management
Redundancy / Backup Capabilities
Web App. Admin Capabilities (store, training, service)

Fig. 65F

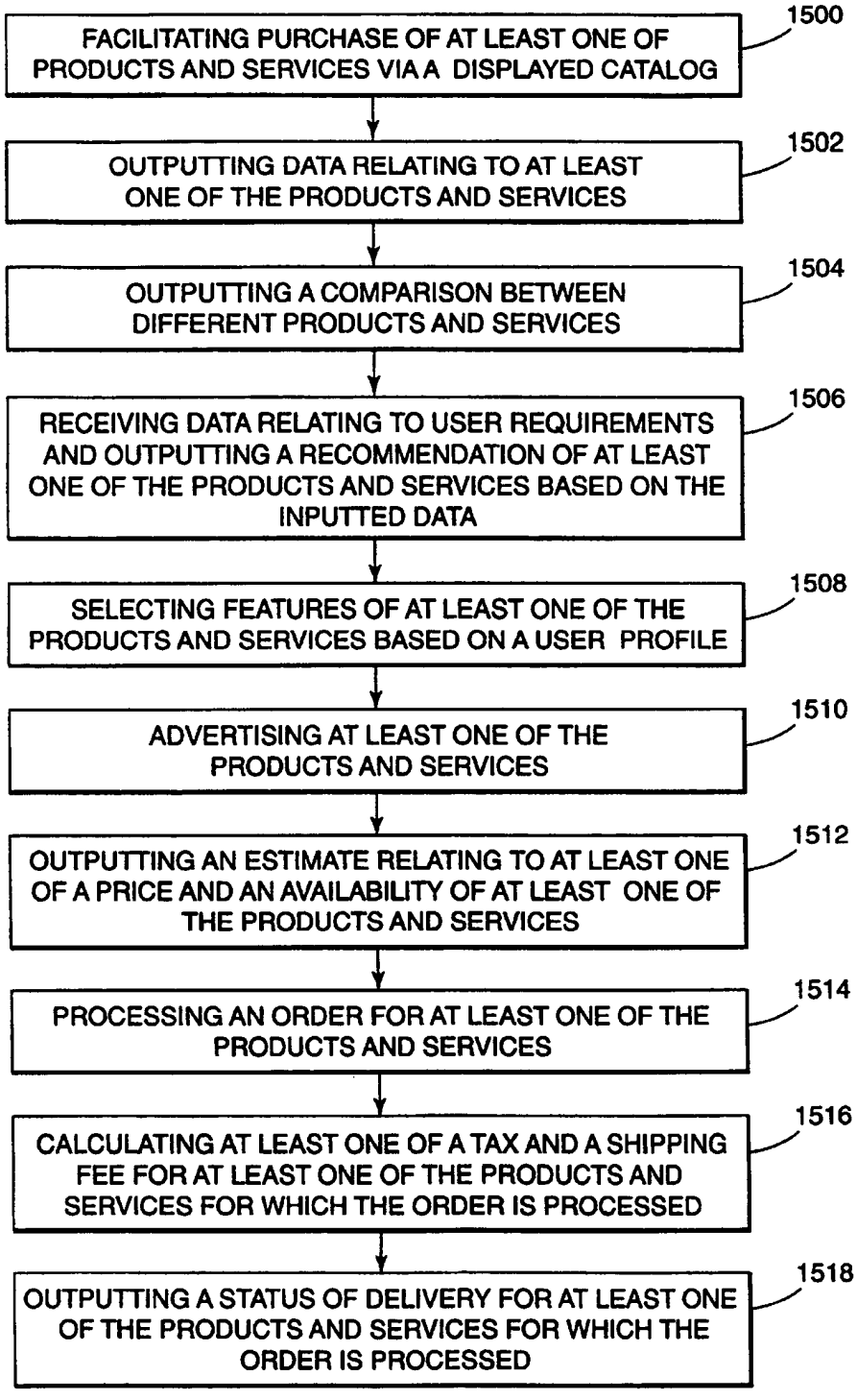

FACILITATING PURCHASE OF AT LEAST ONE OF PRODUCTS AND SERVICES VIA A DISPLAYED CATALOG
1500
OUTPUTTING DATA RELATING TO AT LEAST ONE OF THE PRODUCTS AND SERVICES
1502
OUTPUTTING A COMPARISON BETWEEN DIFFERENT PRODUCTS AND SERVICES
1504
RECEIVING DATA RELATING TO USER REQUIREMENTS AND OUTPUTTING A RECOMMENDATION OF AT LEAST ONE OF THE PRODUCTS AND SERVICES BASED ON THE INPUTTED DATA
1506
SELECTING FEATURES OF AT LEAST ONE OF THE PRODUCTS AND SERVICES BASED ON A USER PROFILE
1508
ADVERTISING AT LEAST ONE OF THE PRODUCTS AND SERVICES
1510
OUTPUTTING AN ESTIMATE RELATING TO AT LEAST ONE OF A PRICE AND AN AVAILABILITY OF AT LEAST ONE OF THE PRODUCTS AND SERVICES
1512
PROCESSING AN ORDER FOR AT LEAST ONE OF THE PRODUCTS AND SERVICES
1514
CALCULATING AT LEAST ONE OF A TAX AND A SHIPPING FEE FOR AT LEAST ONE OF THE PRODUCTS AND SERVICES FOR WHICH THE ORDER IS PROCESSED
1516
OUTPUTTING A STATUS OF DELIVERY FOR AT LEAST ONE OF THE PRODUCTS AND SERVICES FOR WHICH THE ORDER IS PROCESSED
1518
1400

Fig. 66

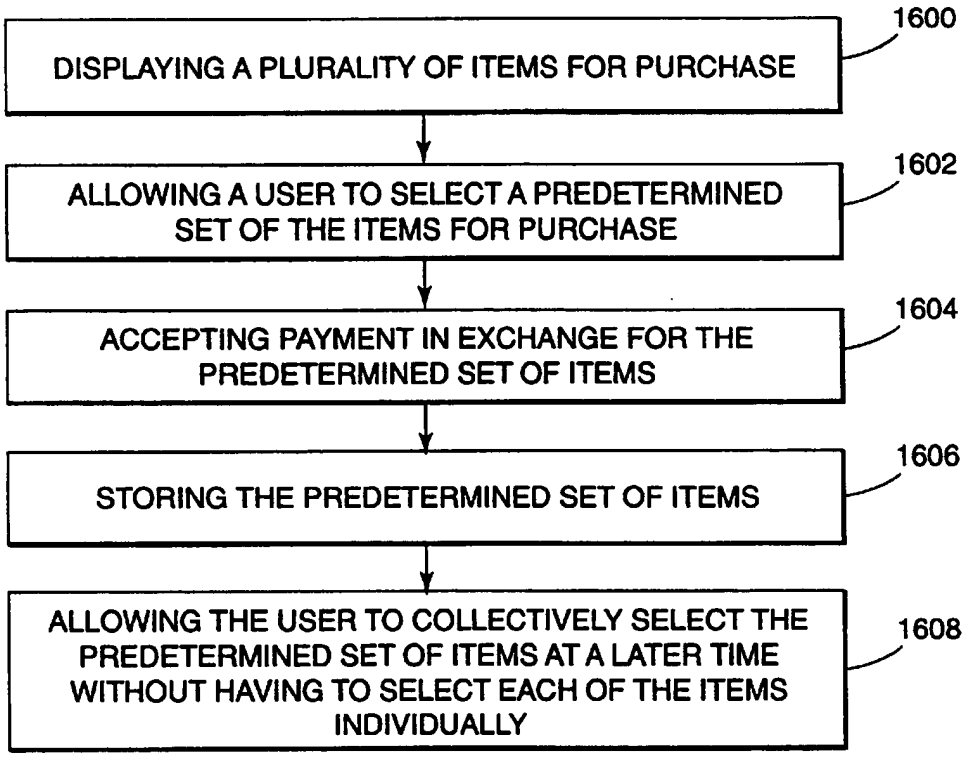

DISPLAYING A PLURALITY OF ITEMS FOR PURCHASE
1600
ALLOWING A USER TO SELECT A PREDETERMINED SET OF THE ITEMS FOR PURCHASE
1602
ACCEPTING PAYMENT IN EXCHANGE FOR THE PREDETERMINED SET OF ITEMS
1604
STORING THE PREDETERMINED SET OF ITEMS
1606
ALLOWING THE USER TO COLLECTIVELY SELECT THE PREDETERMINED SET OF ITEMS AT A LATER TIME WITHOUT HAVING TO SELECT EACH OF THE ITEMS INDIVIDUALLY
1608

Fig. 67

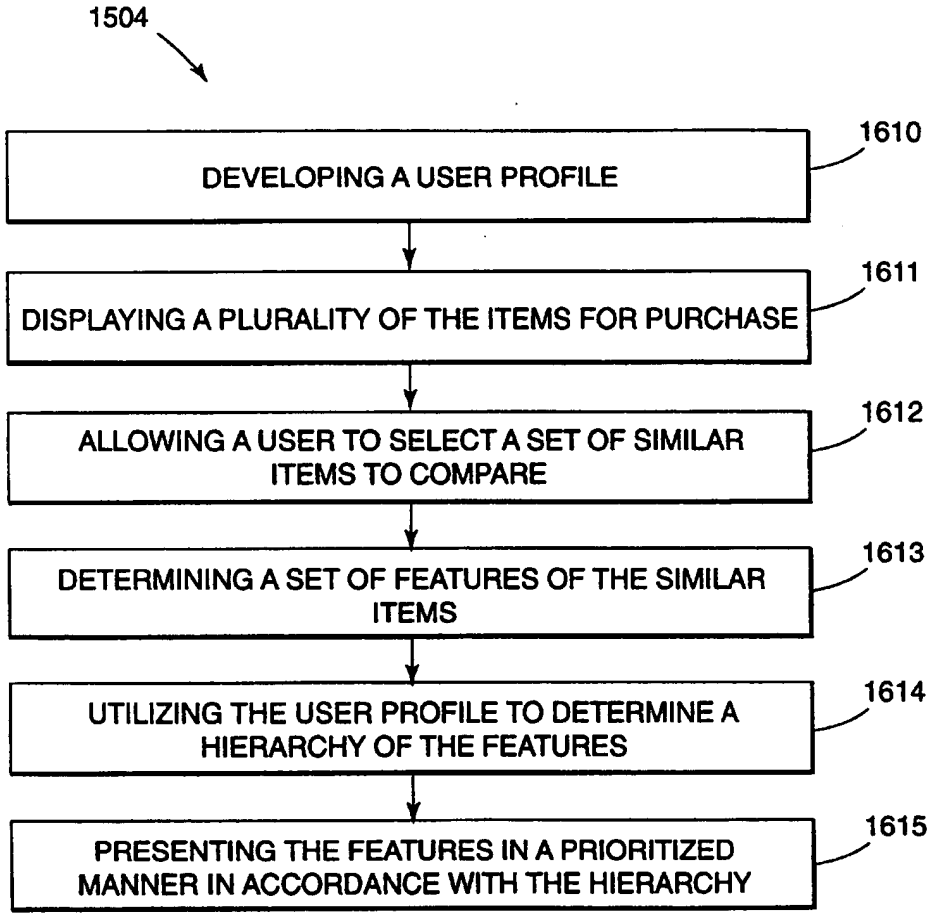

1504
DEVELOPING A USER PROFILE
1610
DISPLAYING A PLURALITY OF THE ITEMS FOR PURCHASE
1611
ALLOWING A USER TO SELECT A SET OF SIMILAR ITEMS TO COMPARE
1612
DETERMINING A SET OF FEATURES OF THE SIMILAR ITEMS
1613
UTILIZING THE USER PROFILE TO DETERMINE A HIERARCHY OF THE FEATURES
1614
PRESENTING THE FEATURES IN A PRIORITIZED MANNER IN ACCORDANCE WITH THE HIERARCHY
1615

Fig. 68

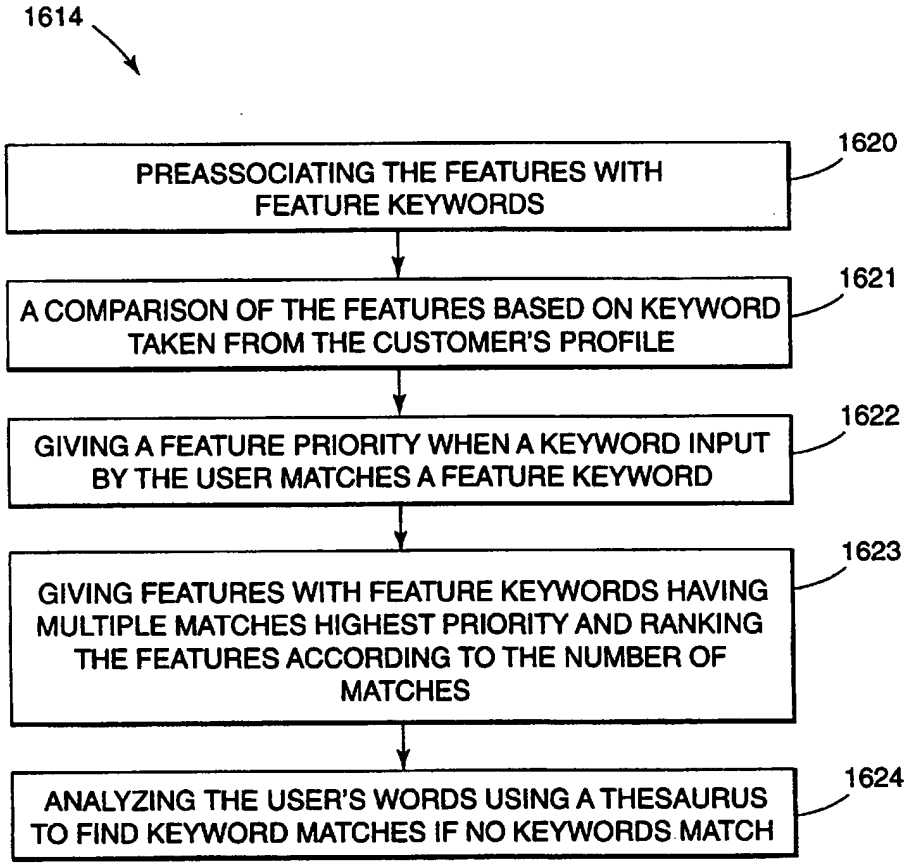

1614
PREASSOCIATING THE FEATURES WITH FEATURE KEYWORDS
1620
A COMPARISON OF THE FEATURES BASED ON KEYWORD TAKEN FROM THE CUSTOMER'S PROFILE
1621
GIVING A FEATURE PRIORITY WHEN A KEYWORD INPUT BY THE USER MATCHES A FEATURE KEYWORD
1622
GIVING FEATURES WITH FEATURE KEYWORDS HAVING MULTIPLE MATCHES HIGHEST PRIORITY AND RANKING THE FEATURES ACCORDING TO THE NUMBER OF MATCHES
1623
ANALYZING THE USER'S WORDS USING A THESAURUS TO FIND KEYWORD MATCHES IF NO KEYWORDS MATCH
1624

Fig. 69

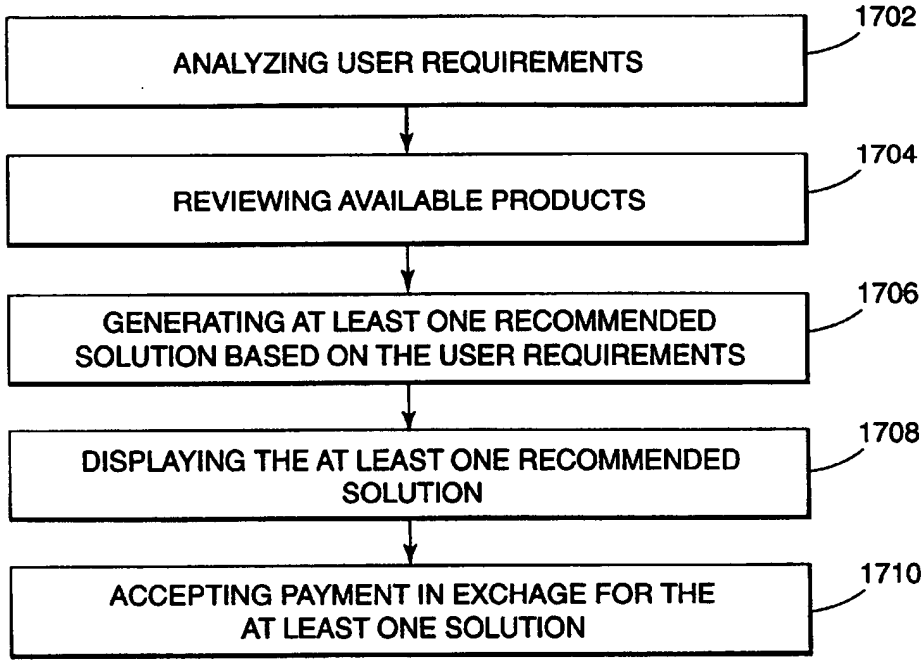

ANALYZING USER REQUIREMENTS
1702
REVIEWING AVAILABLE PRODUCTS
1704
GENERATING AT LEAST ONE RECOMMENDED SOLUTION BASED ON THE USER REQUIREMENTS
1706
DISPLAYING THE AT LEAST ONE RECOMMENDED SOLUTION
1708
ACCEPTING PAYMENT IN EXCHAGE FOR THE AT LEAST ONE SOLUTION
1710

Fig. 70

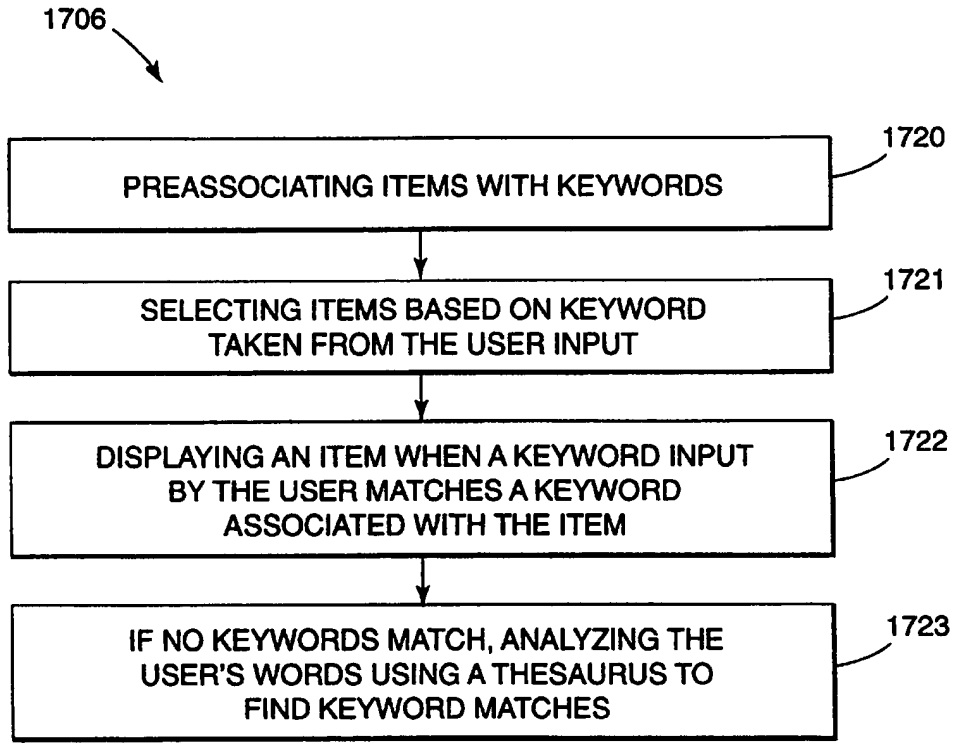

1706
PREASSOCIATING ITEMS WITH KEYWORDS
1720
SELECTING ITEMS BASED ON KEYWORD TAKEN FROM THE USER INPUT
1721
DISPLAYING AN ITEM WHEN A KEYWORD INPUT BY THE USER MATCHES A KEYWORD ASSOCIATED WITH THE ITEM
1722
IF NO KEYWORDS MATCH, ANALYZING THE USER'S WORDS USING A THESAURUS TO FIND KEYWORD MATCHES
1723

Fig. 71

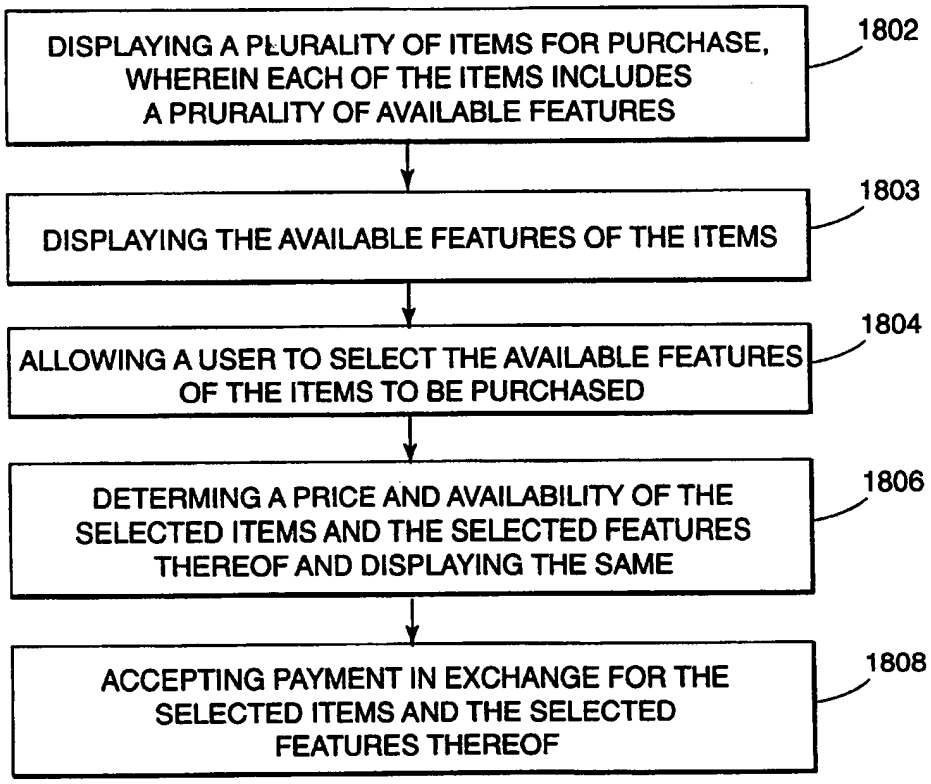

DISPLAYING A PLURALITY OF ITEMS FOR PURCHASE, WHEREIN EACH OF THE ITEMS INCLUDES A PRURALITY OF AVAILABLE FEATURES
1802
DISPLAYING THE AVAILABLE FEATURES OF THE ITEMS
1803
ALLOWING A USER TO SELECT THE AVAILABLE FEATURES OF THE ITEMS TO BE PURCHASED
1804
DETERMING A PRICE AND AVAILABILITY OF THE SELECTED ITEMS AND THE SELECTED FEATURES THEREOF AND DISPLAYING THE SAME
1806
ACCEPTING PAYMENT IN EXCHANGE FOR THE SELECTED ITEMS AND THE SELECTED FEATURES THEREOF
1808

Fig. 72

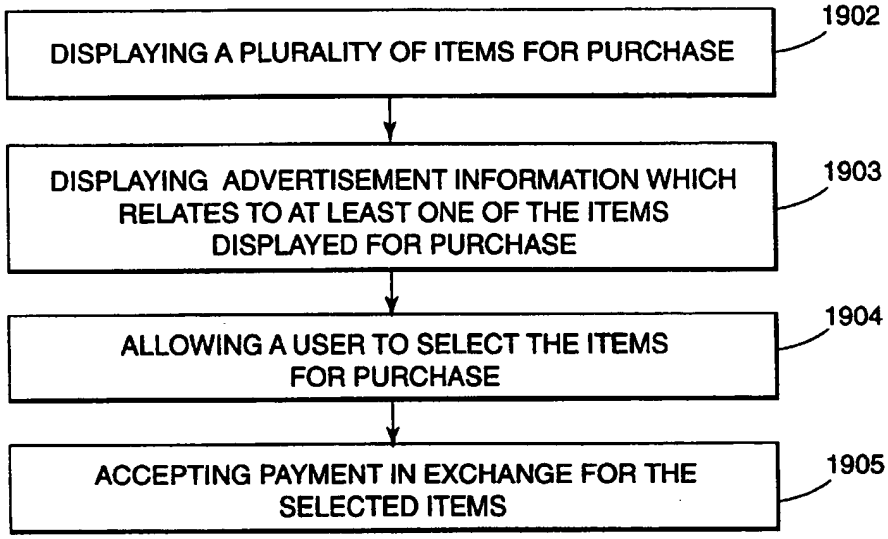

DISPLAYING A PLURALITY OF ITEMS FOR PURCHASE
1902
DISPLAYING ADVERTISEMENT INFORMATION WHICH RELATES TO AT LEAST ONE OF THE ITEMS DISPLAYED FOR PURCHASE
1903
ALLOWING A USER TO SELECT THE ITEMS FOR PURCHASE
1904
ACCEPTING PAYMENT IN EXCHANGE FOR THE SELECTED ITEMS
1905

Fig. 73

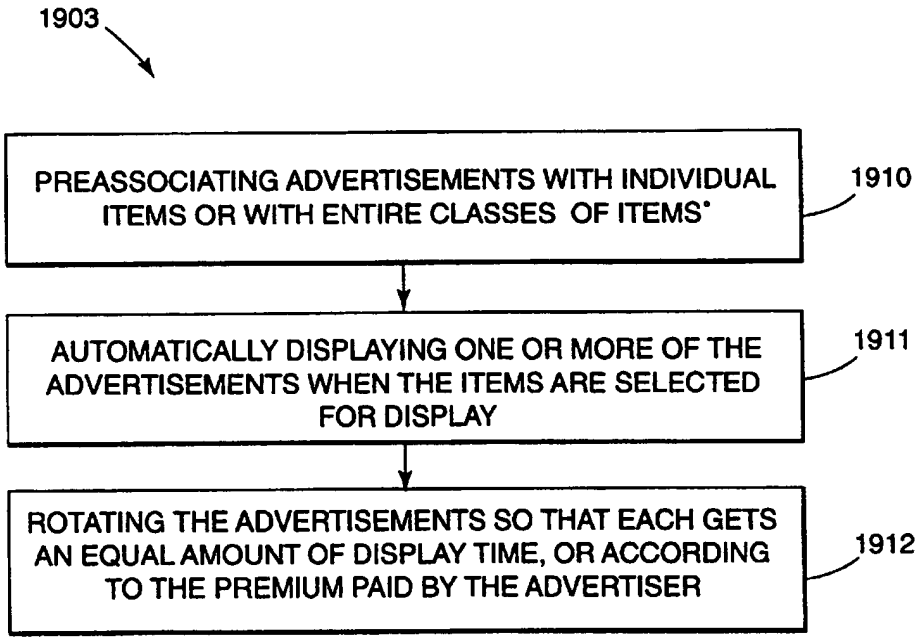

1903
PREASSOCIATING ADVERTISEMENTS WITH INDIVIDUAL ITEMS OR WITH ENTIRE CLASSES OF ITEMS
1910
AUTOMATICALLY DISPLAYING ONE OR MORE OF THE ADVERTISEMENTS WHEN THE ITEMS ARE SELECTED FOR DISPLAY
1911
ROTATING THE ADVERTISEMENTS SO THAT EACH GETS AN EQUAL AMOUNT OF DISPLAY TIME, OR ACCORDING TO THE PREMIUM PAID BY THE ADVERTISER
1912

Fig. 74

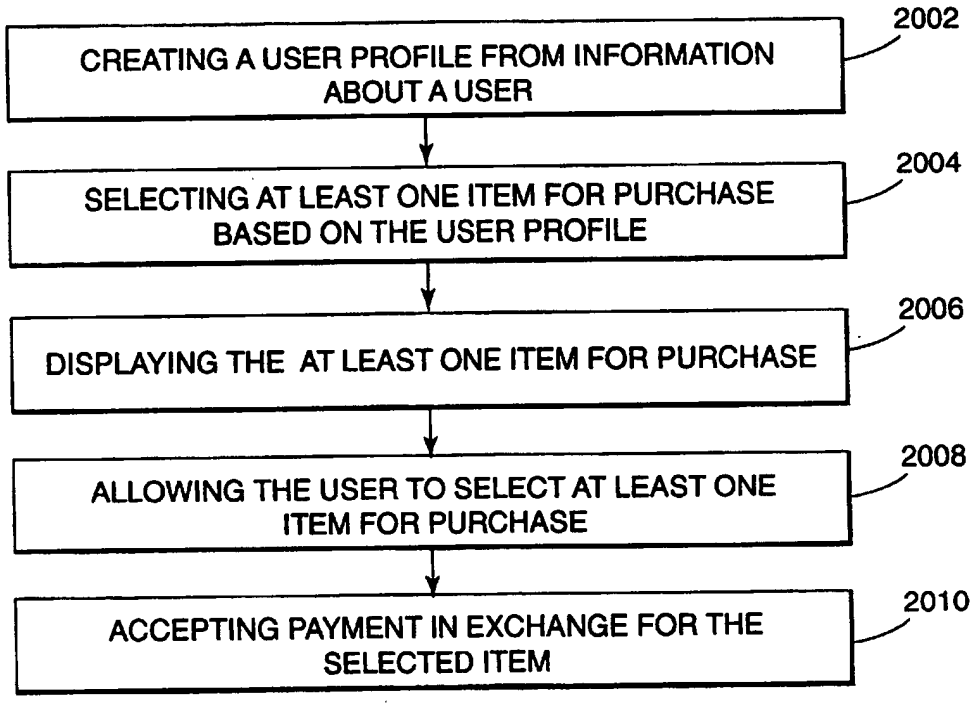

CREATING A USER PROFILE FROM INFORMATION ABOUT A USER
2002
SELECTING AT LEAST ONE ITEM FOR PURCHASE BASED ON THE USER PROFILE
2004
DISPLAYING THE AT LEAST ONE ITEM FOR PURCHASE
2006
ALLOWING THE USER TO SELECT AT LEAST ONE ITEM FOR PURCHASE
2008
ACCEPTING PAYMENT IN EXCHANGE FOR THE SELECTED ITEM
2010

Fig. 75

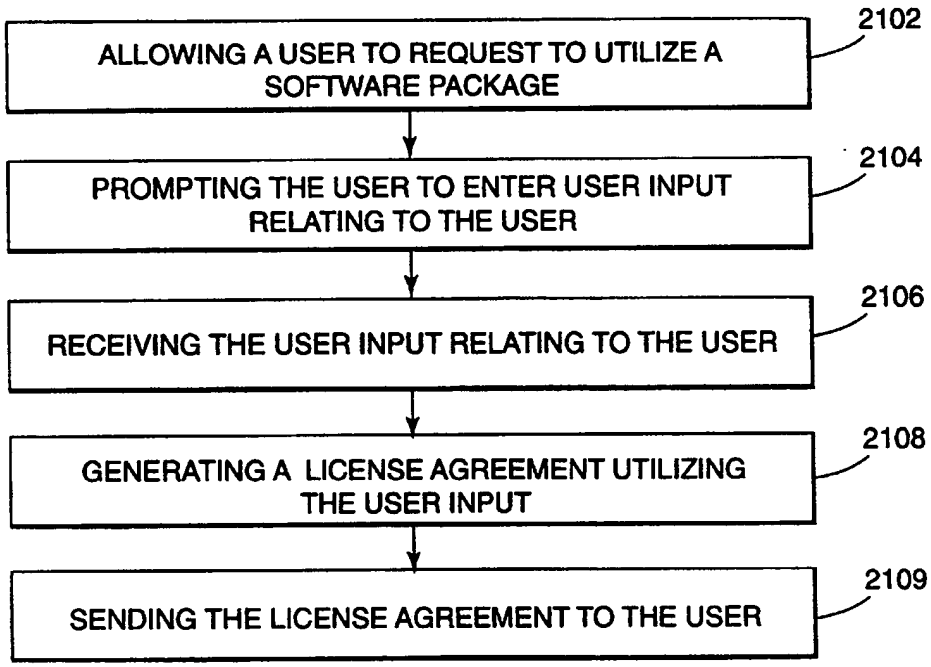

ALLOWING A USER TO REQUEST TO UTILIZE A SOFTWARE PACKAGE
2102
PROMPTING THE USER TO ENTER USER INPUT RELATING TO THE USER
2104
RECEIVING THE USER INPUT RELATING TO THE USER
2106
GENERATING A LICENSE AGREEMENT UTILIZING THE USER INPUT
2108
SENDING THE LICENSE AGREEMENT TO THE USER
2109

Fig. 76

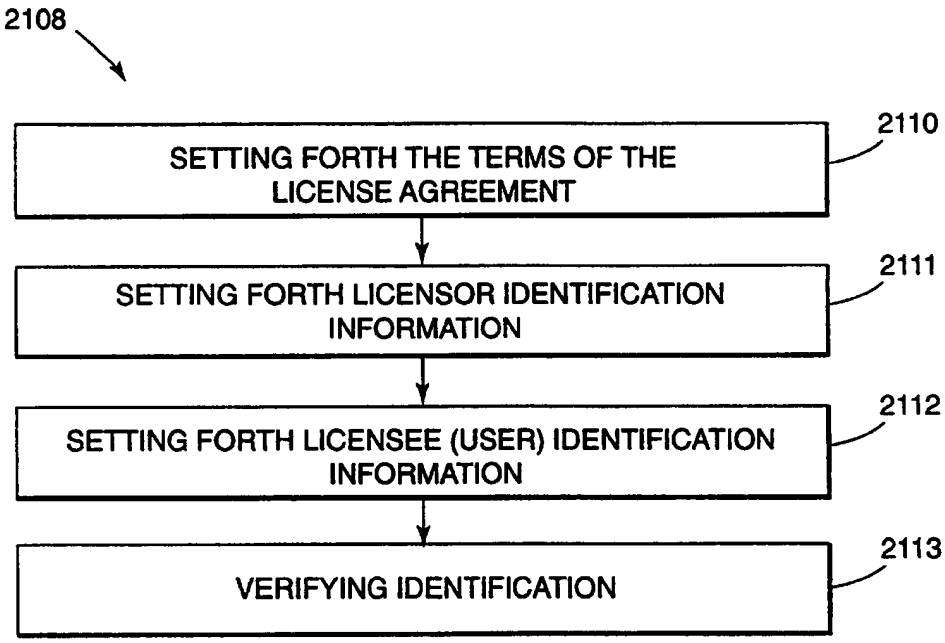

2108
SETTING FORTH THE TERMS OF THE LICENSE AGREEMENT
2110
SETTING FORTH LICENSOR IDENTIFICATION INFORMATION
2111
SETTING FORTH LICENSEE (USER) IDENTIFICATION INFORMATION
2112
VERIFYING IDENTIFICATION
2113

Fig. 77

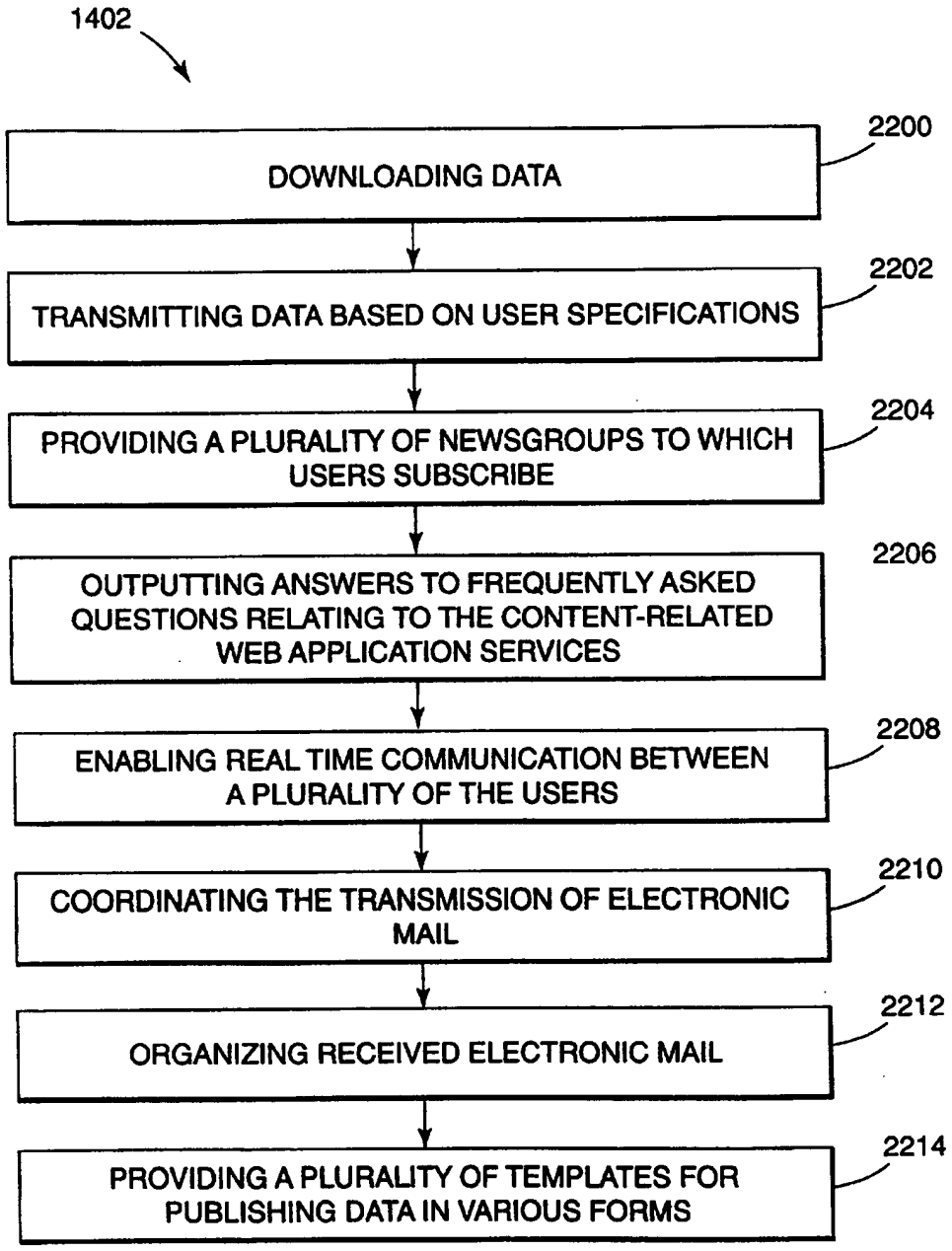
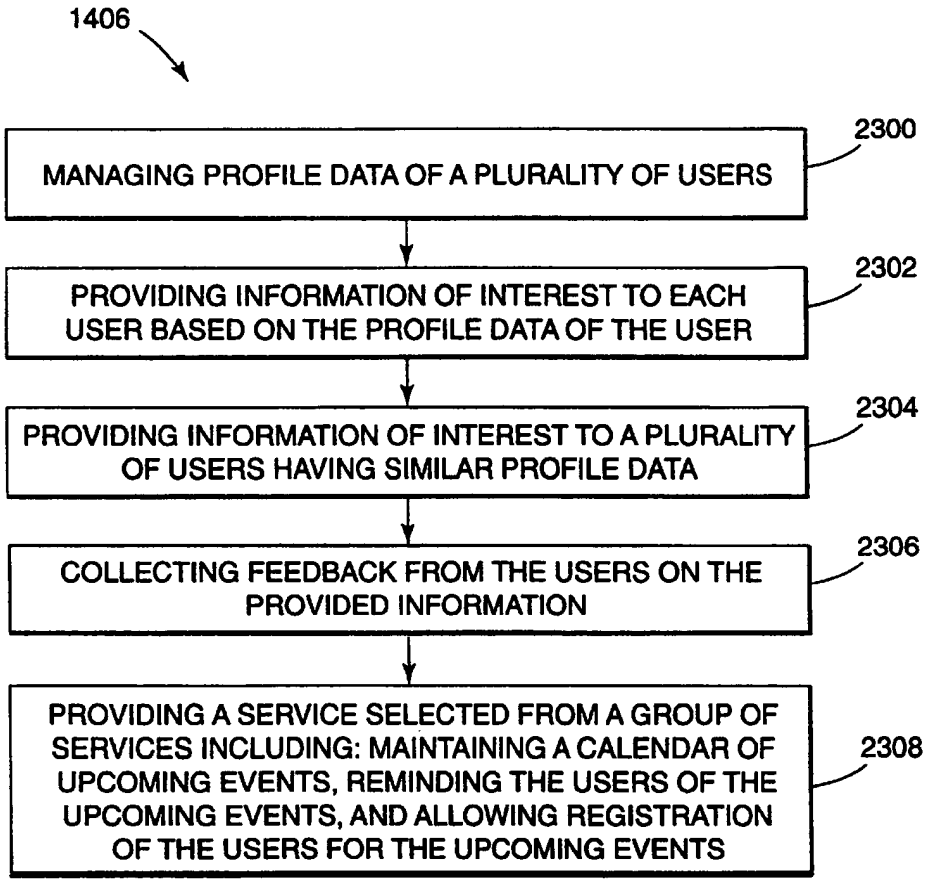

1402
DOWNLOADING DATA
2200
TRANSMITTING DATA BASED ON USER SPECIFICATIONS
2202
PROVIDING A PLURALITY OF NEWSGROUPS TO WHICH USERS SUBSCRIBE
2204
OUTPUTTING ANSWERS TO FREQUENTLY ASKED QUESTIONS RELATING TO THE CONTENT-RELATED WEB APPLICATION SERVICES
2206
ENABLING REAL TIME COMMUNICATION BETWEEN A PLURALITY OF THE USERS
2208
COORDINATING THE TRANSMISSION OF ELECTRONIC MAIL
2210
ORGANIZING RECEIVED ELECTRONIC MAIL
2212
PROVIDING A PLURALITY OF TEMPLATES FOR PUBLISHING DATA IN VARIOUS FORMS
2214

Fig. 78


1406
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2300
PROVIDING INFORMATION OF INTEREST TO EACH USER BASED ON THE PROFILE DATA OF THE USER
2302
PROVIDING INFORMATION OF INTEREST TO A PLURALITY OF USERS HAVING SIMILAR PROFILE DATA
2304
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2306
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2308

Fig. 79

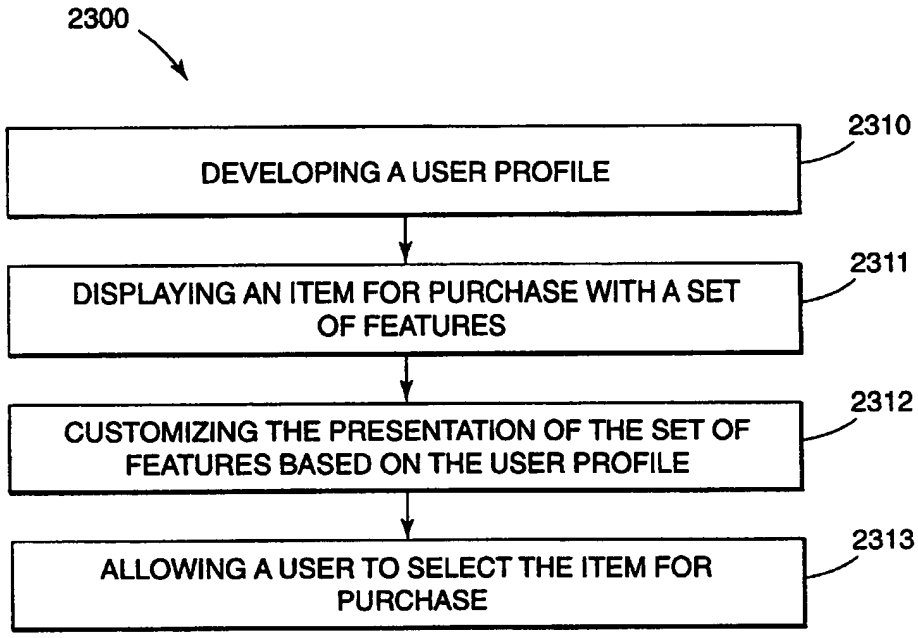
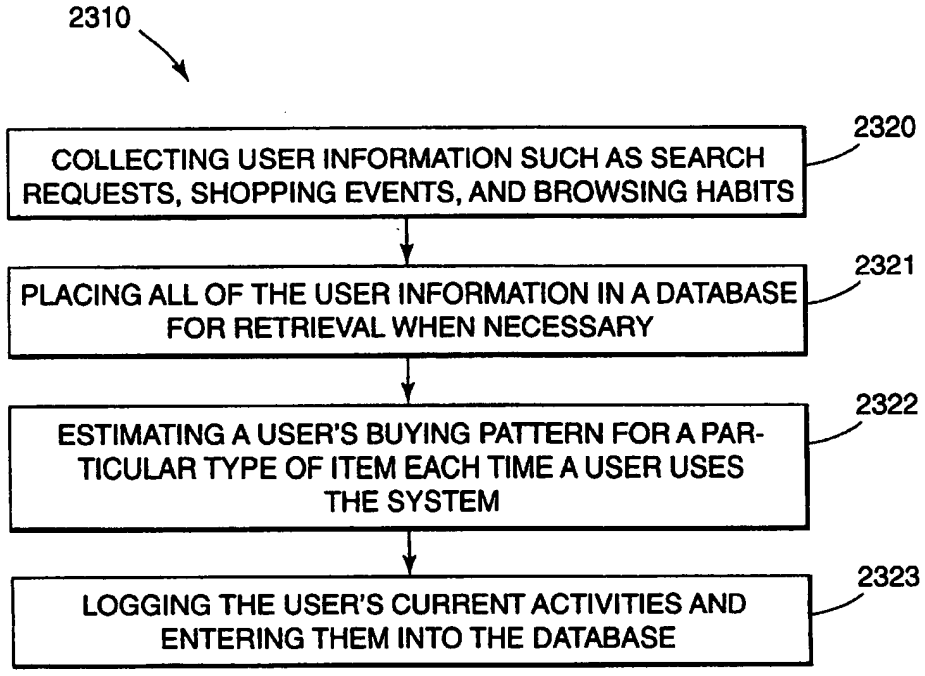

2300
DEVELOPING A USER PROFILE
2310
DISPLAYING AN ITEM FOR PURCHASE WITH A SET OF FEATURES
2311
CUSTOMIZING THE PRESENTATION OF THE SET OF FEATURES BASED ON THE USER PROFILE
2312
ALLOWING A USER TO SELECT THE ITEM FOR PURCHASE
2313

Fig. 80


2310
COLLECTING USER INFORMATION SUCH AS SEARCH REQUESTS, SHOPPING EVENTS, AND BROWSING HABITS
2320
PLACING ALL OF THE USER INFORMATION IN A DATABASE FOR RETRIEVAL WHEN NECESSARY
2321
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2322
LOGGING THE USER'S CURRENT ACTIVITIES AND ENTERING THEM INTO THE DATABASE
2323

Fig. 81

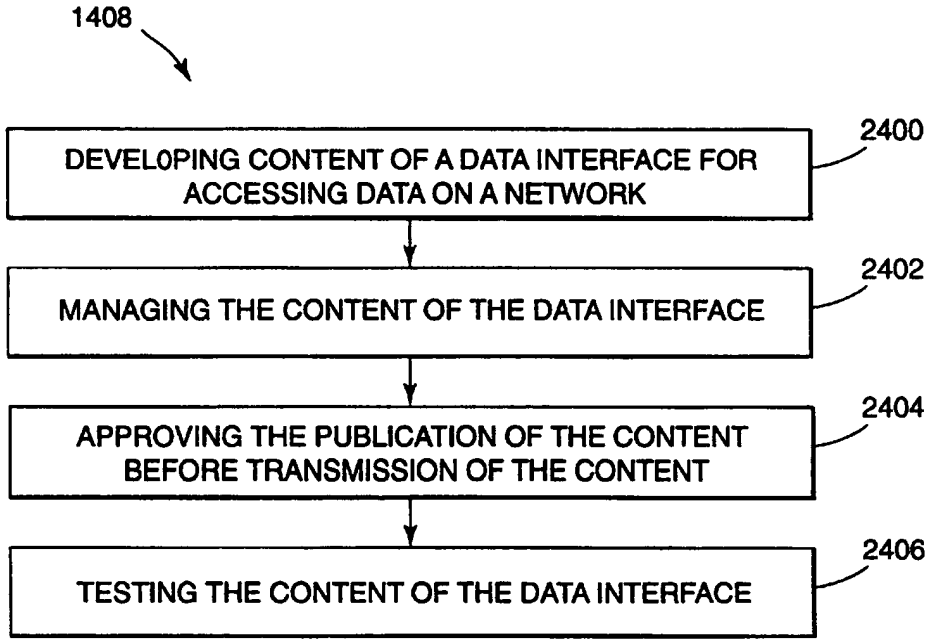

1408
DEVELOPING CONTENT OF A DATA INTERFACE FOR ACCESSING DATA ON A NETWORK
2400
MANAGING THE CONTENT OF THE DATA INTERFACE
2402
APPROVING THE PUBLICATION OF THE CONTENT BEFORE TRANSMISSION OF THE CONTENT
2404
TESTING THE CONTENT OF THE DATA INTERFACE
2406

Fig. 82

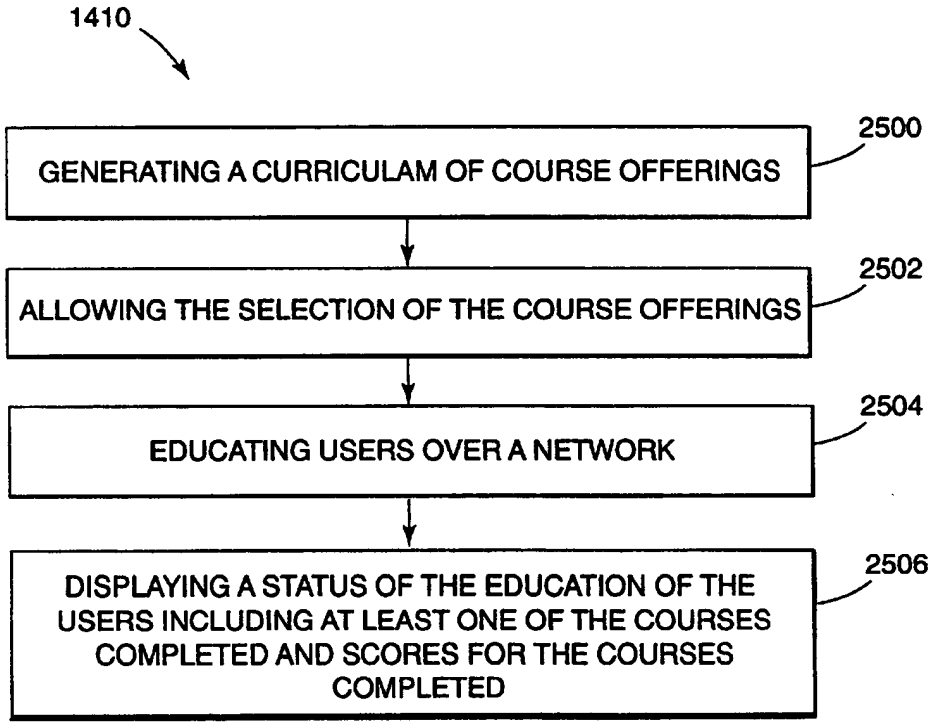

1410
GENERATING A CURRICULAM OF COURSE OFFERINGS
2500
ALLOWING THE SELECTION OF THE COURSE OFFERINGS
2502
EDUCATING USERS OVER A NETWORK
2504
DISPLAYING A STATUS OF THE EDUCATION OF THE USERS INCLUDING AT LEAST ONE OF THE COURSES COMPLETED AND SCORES FOR THE COURSES COMPLETED
2506

Fig. 83

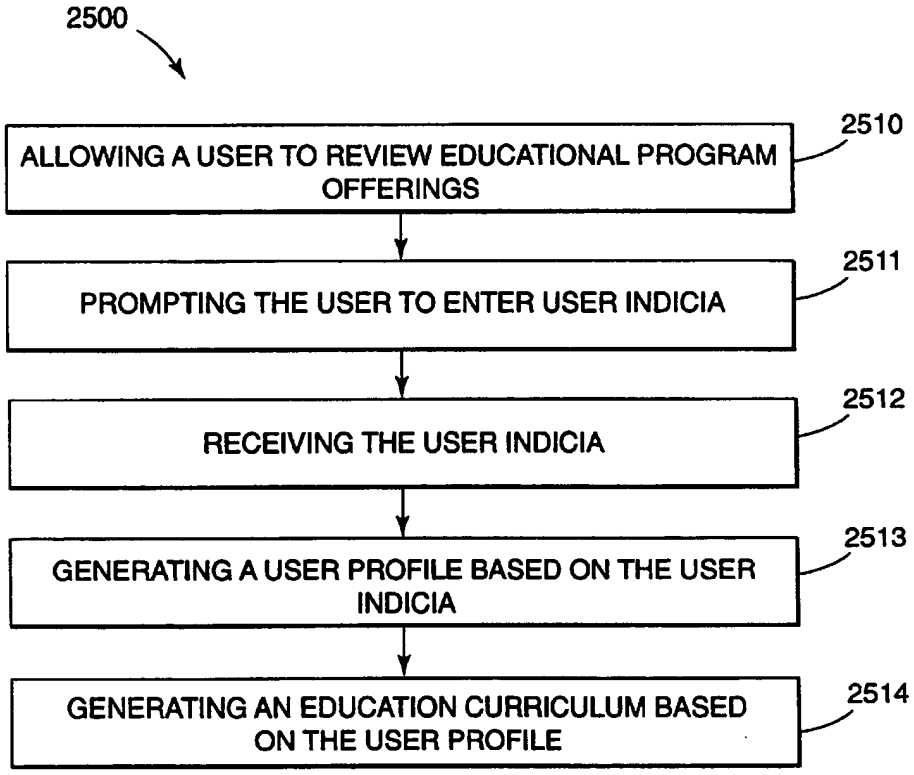

2500
ALLOWING A USER TO REVIEW EDUCATIONAL PROGRAM OFFERINGS
2510
PROMPTING THE USER TO ENTER USER INDICIA
2511
RECEIVING THE USER INDICIA
2512
GENERATING A USER PROFILE BASED ON THE USER INDICIA
2513
GENERATING AN EDUCATION CURRICULUM BASED ON THE USER PROFILE
2514

Fig. 84

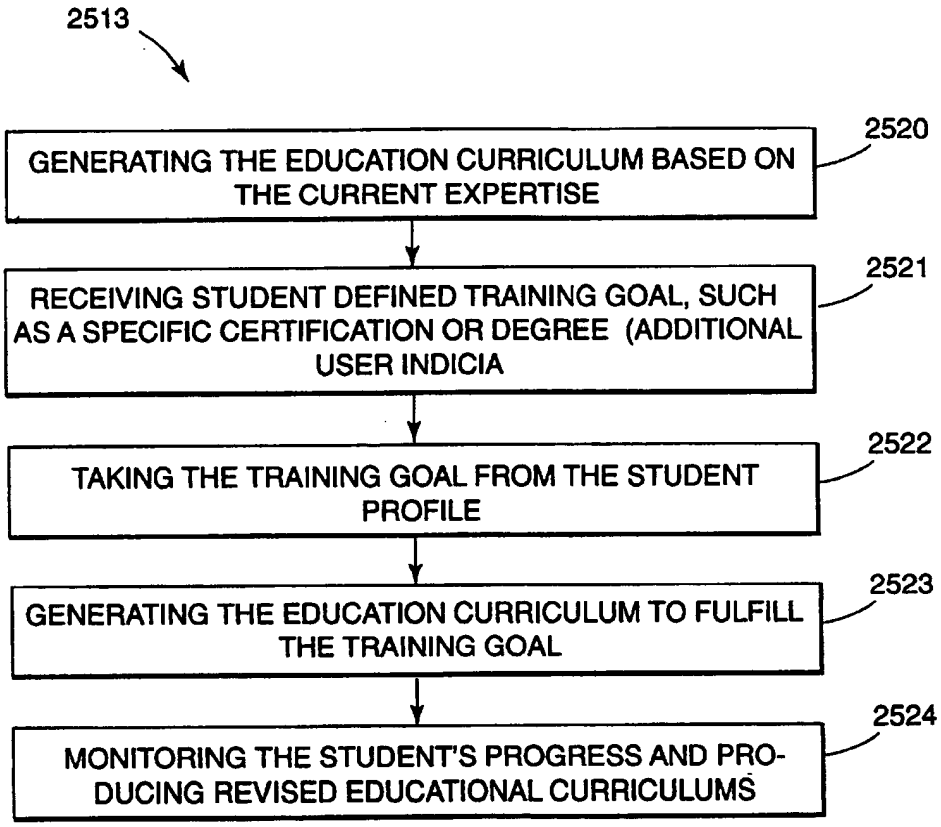

2513
GENERATING THE EDUCATION CURRICULUM BASED ON THE CURRENT EXPERTISE
2520
RECEIVING STUDENT DEFINED TRAINING GOAL, SUCH AS A SPECIFIC CERTIFICATION OR DEGREE (ADDITIONAL USER INDICIA
2521
TAKING THE TRAINING GOAL FROM THE STUDENT PROFILE
2522
GENERATING THE EDUCATION CURRICULUM TO FULFILL THE TRAINING GOAL
2523
MONITORING THE STUDENT'S PROGRESS AND PRODUCING REVISED EDUCATIONAL CURRICULUMS
2524

Fig. 85

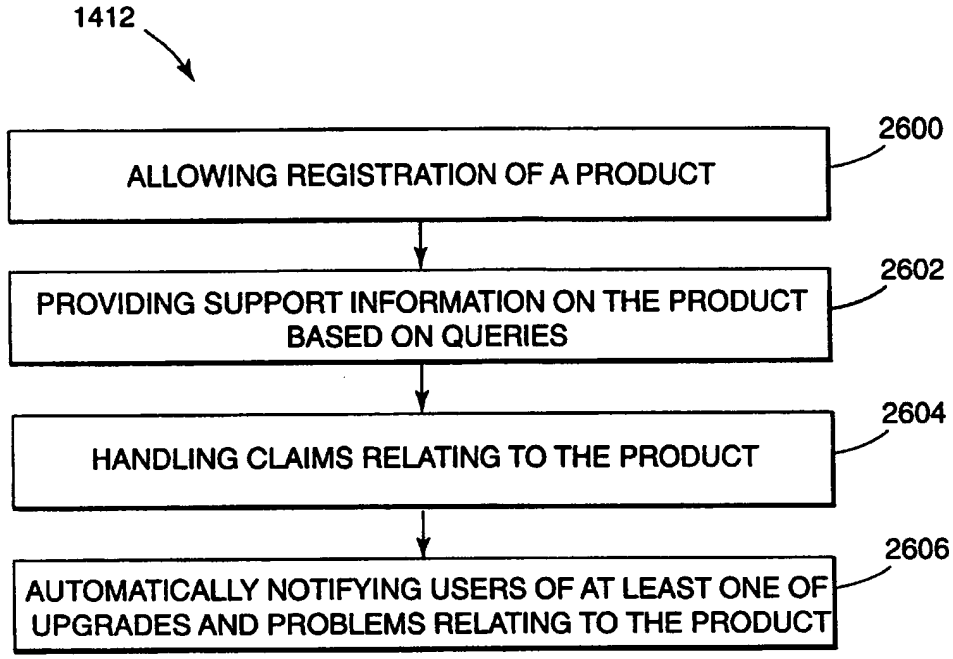

1412
ALLOWING REGISTRATION OF A PRODUCT
2600
PROVIDING SUPPORT INFORMATION ON THE PRODUCT BASED ON QUERIES
2602
HANDLING CLAIMS RELATING TO THE PRODUCT
2604
AUTOMATICALLY NOTIFYING USERS OF AT LEAST ONE OF UPGRADES AND PROBLEMS RELATING TO THE PRODUCT
2606

Fig. 86

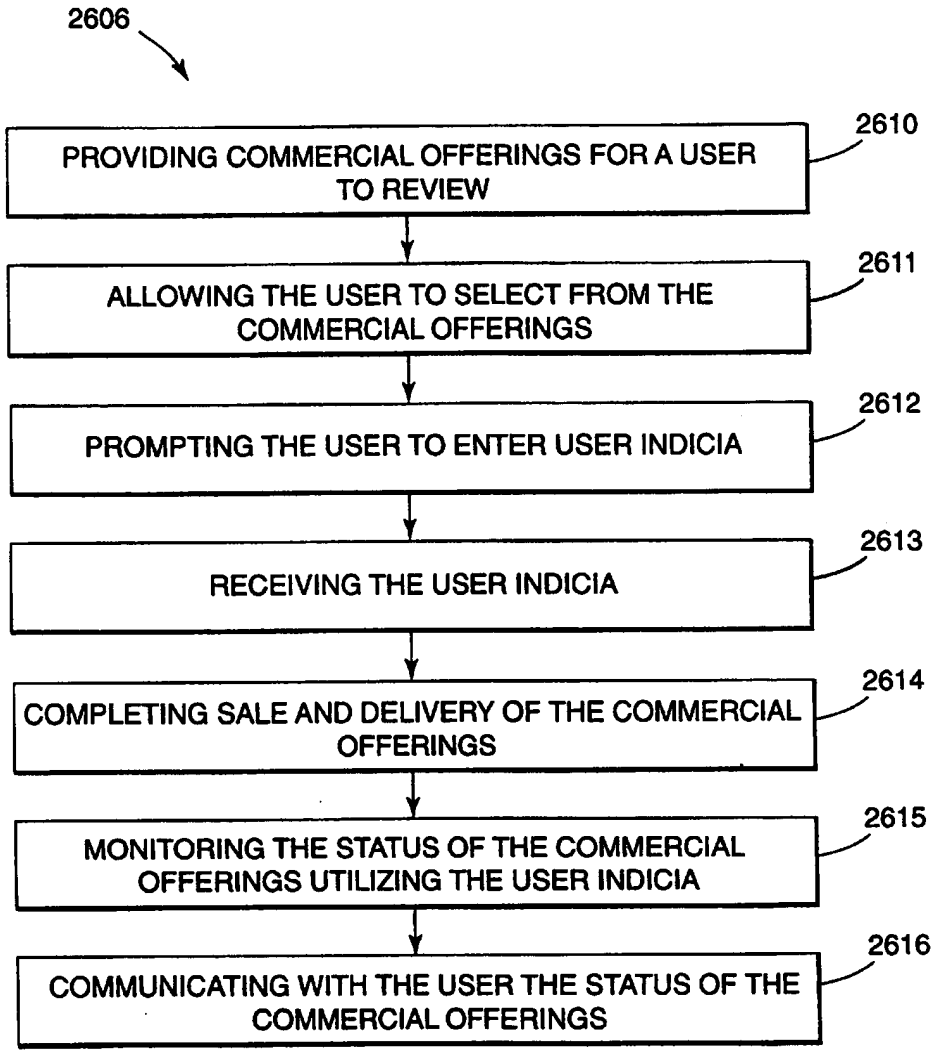

2606
PROVIDING COMMERCIAL OFFERINGS FOR A USER TO REVIEW
2610
ALLOWING THE USER TO SELECT FROM THE COMMERCIAL OFFERINGS
2611
PROMPTING THE USER TO ENTER USER INDICIA
2612
RECEIVING THE USER INDICIA
2613
COMPLETING SALE AND DELIVERY OF THE COMMERCIAL OFFERINGS
2614
MONITORING THE STATUS OF THE COMMERCIAL OFFERINGS UTILIZING THE USER INDICIA
2615
COMMUNICATING WITH THE USER THE STATUS OF THE COMMERCIAL OFFERINGS
2616

Fig. 87

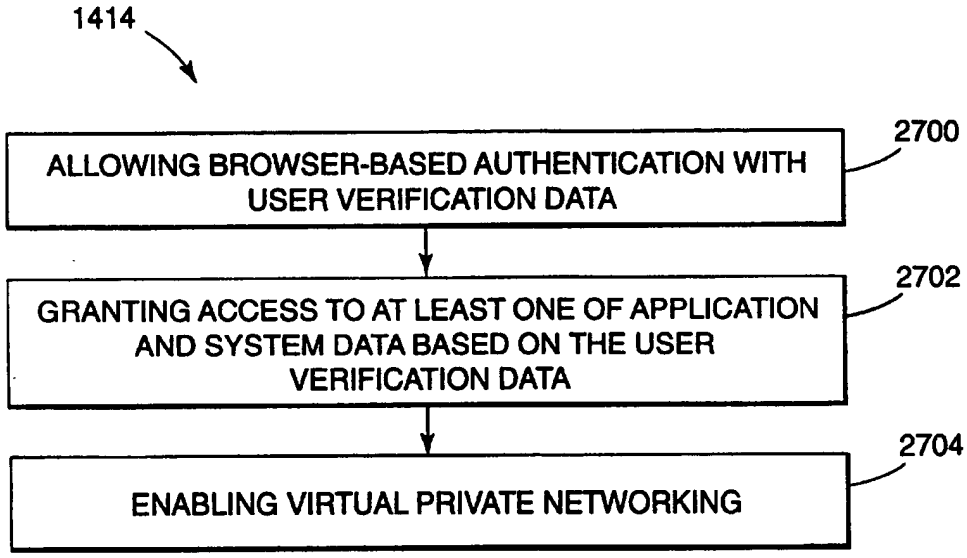

1414
ALLOWING BROWSER-BASED AUTHENTICATION WITH USER VERIFICATION DATA
2700
GRANTING ACCESS TO AT LEAST ONE OF APPLICATION AND SYSTEM DATA BASED ON THE USER VERIFICATION DATA
2702
ENABLING VIRTUAL PRIVATE NETWORKING
2704

Fig. 88

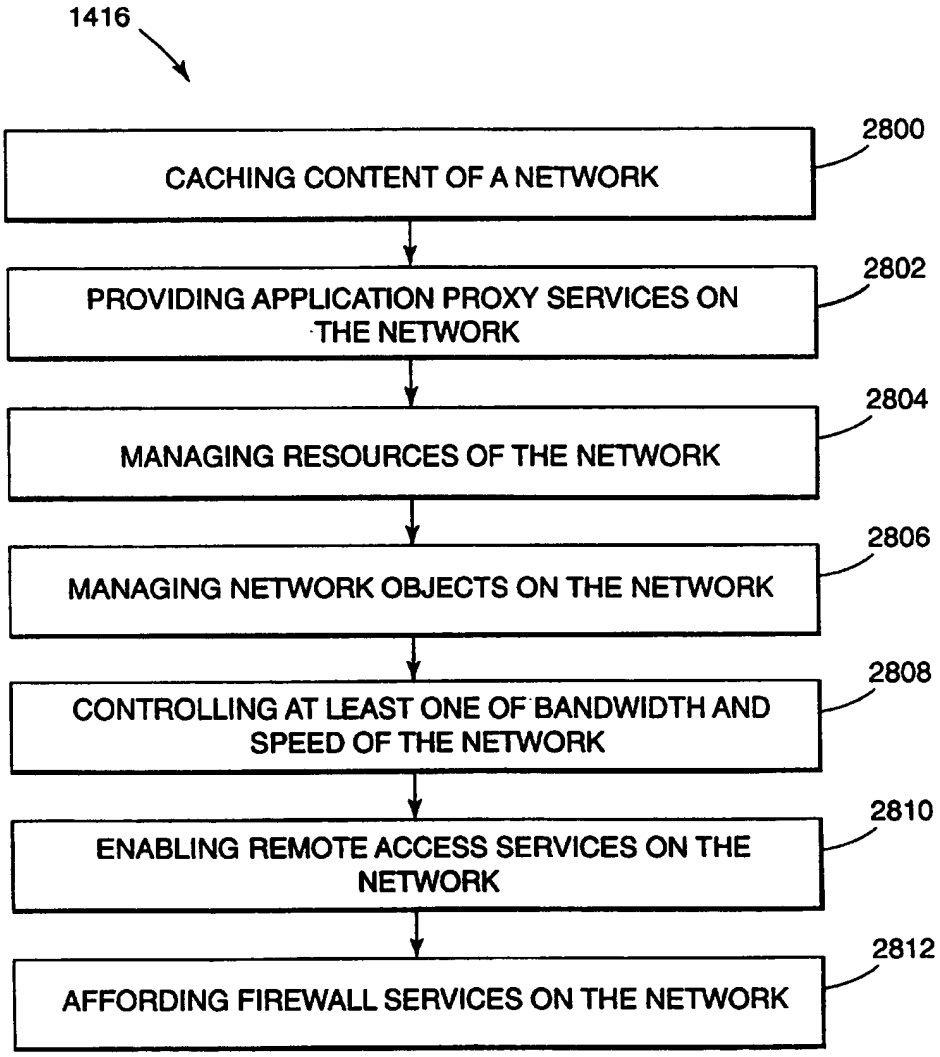

1416
CACHING CONTENT OF A NETWORK
2800
PROVIDING APPLICATION PROXY SERVICES ON THE NETWORK
2802
MANAGING RESOURCES OF THE NETWORK
2804
MANAGING NETWORK OBJECTS ON THE NETWORK
2806
CONTROLLING AT LEAST ONE OF BANDWIDTH AND SPEED OF THE NETWORK
2808
ENABLING REMOTE ACCESS SERVICES ON THE NETWORK
2810
AFFORDING FIREWALL SERVICES ON THE NETWORK
2812

Fig. 89

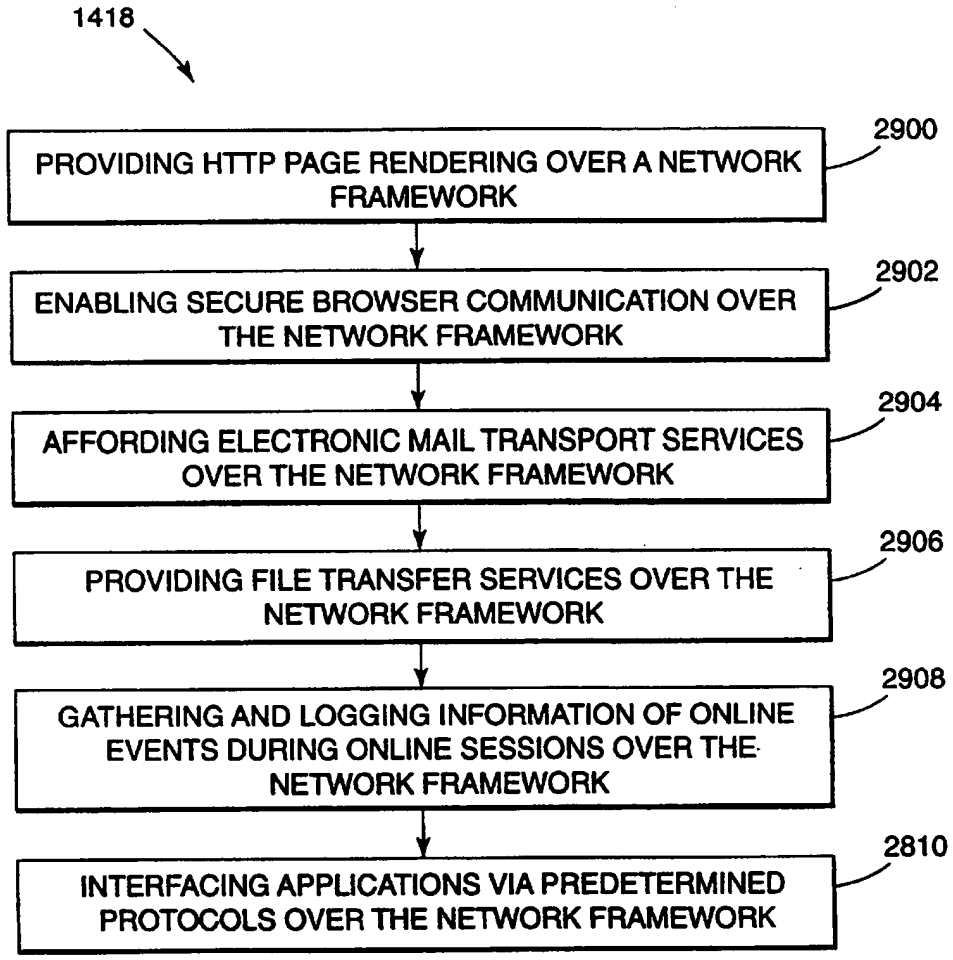
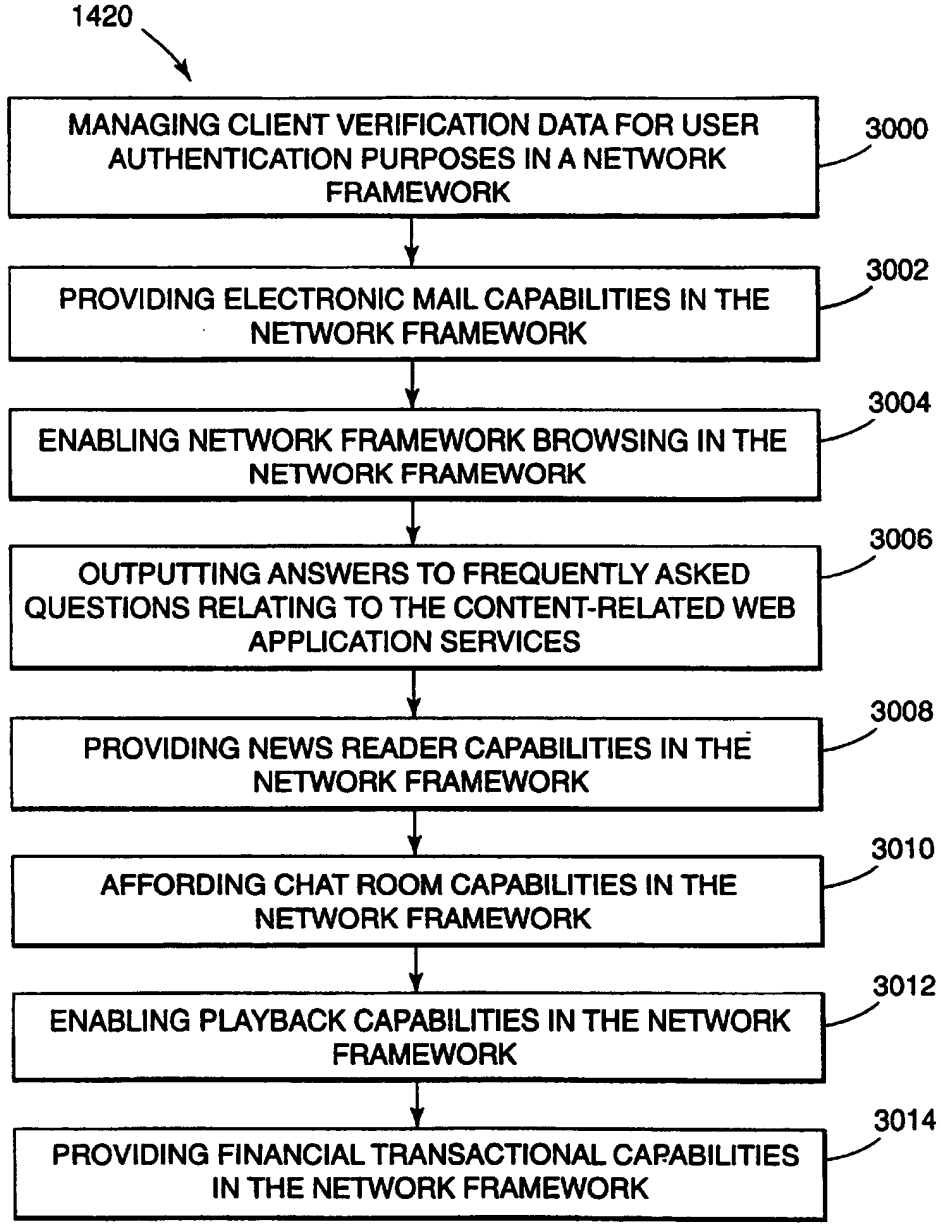

1418
PROVIDING HTTP PAGE RENDERING OVER A NETWORK FRAMEWORK
2900
ENABLING SECURE BROWSER COMMUNICATION OVER THE NETWORK FRAMEWORK
2902
AFFORDING ELECTRONIC MAIL TRANSPORT SERVICES OVER THE NETWORK FRAMEWORK
2904
PROVIDING FILE TRANSFER SERVICES OVER THE NETWORK FRAMEWORK
2906
GATHERING AND LOGGING INFORMATION OF ONLINE EVENTS DURING ONLINE SESSIONS OVER THE NETWORK FRAMEWORK
2908
INTERFACING APPLICATIONS VIA PREDETERMINED PROTOCOLS OVER THE NETWORK FRAMEWORK
2810

Fig. 90


1420
MANAGING CLIENT VERIFICATION DATA FOR USER AUTHENTICATION PURPOSES IN A NETWORK FRAMEWORK
3000
PROVIDING ELECTRONIC MAIL CAPABILITIES IN THE NETWORK FRAMEWORK
3002
ENABLING NETWORK FRAMEWORK BROWSING IN THE NETWORK FRAMEWORK
3004
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3006
PROVIDING NEWS READER CAPABILITIES IN THE NETWORK FRAMEWORK
3008
AFFORDING CHAT ROOM CAPABILITIES IN THE NETWORK FRAMEWORK
3010
ENABLING PLAYBACK CAPABILITIES IN THE NETWORK FRAMEWORK
3012
PROVIDING FINANCIAL TRANSACTIONAL CAPABILITIES IN THE NETWORK FRAMEWORK
3014

Fig. 91

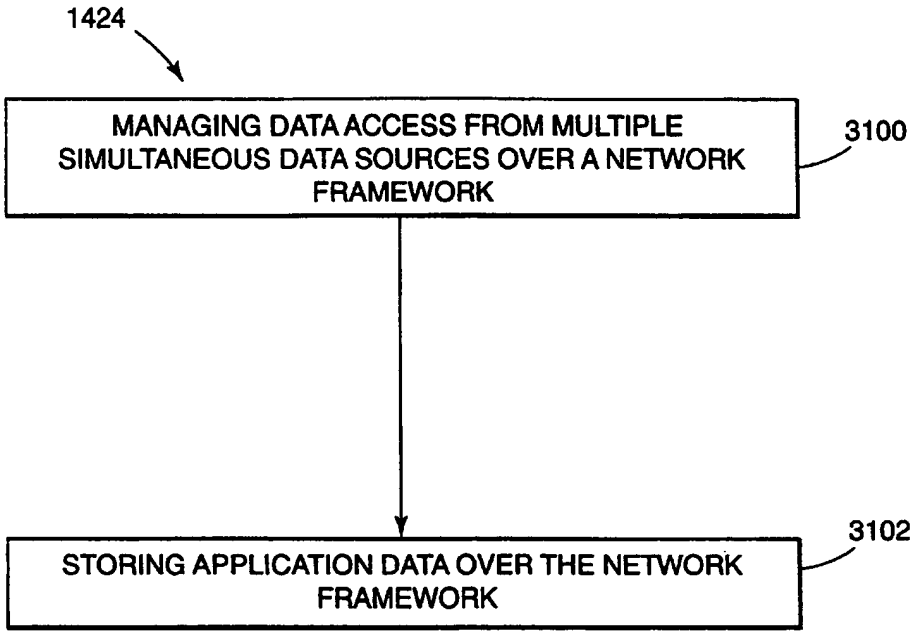

1424
MANAGING DATA ACCESS FROM MULTIPLE SIMULTANEOUS DATA SOURCES OVER A NETWORK FRAMEWORK
3100
STORING APPLICATION DATA OVER THE NETWORK FRAMEWORK
3102

Fig. 92

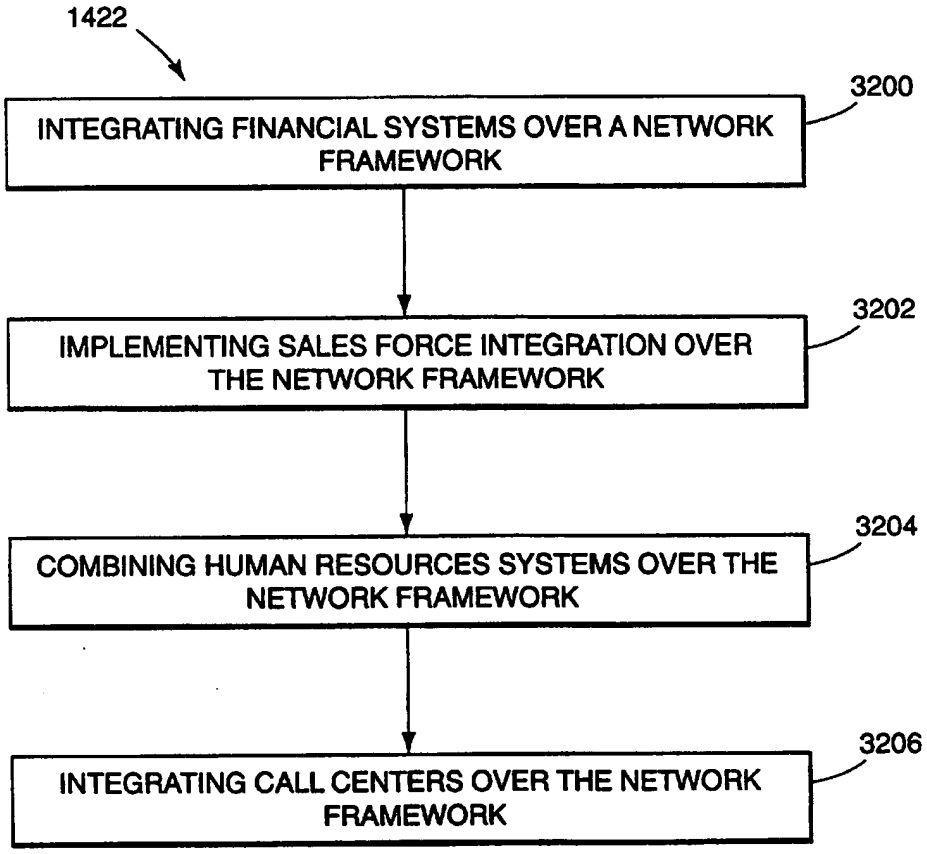

1422
INTEGRATING FINANCIAL SYSTEMS OVER A NETWORK FRAMEWORK
3200
IMPLEMENTING SALES FORCE INTEGRATION OVER THE NETWORK FRAMEWORK
3202
COMBINING HUMAN RESOURCES SYSTEMS OVER THE NETWORK FRAMEWORK
3204
INTEGRATING CALL CENTERS OVER THE NETWORK FRAMEWORK
3206

Fig. 93

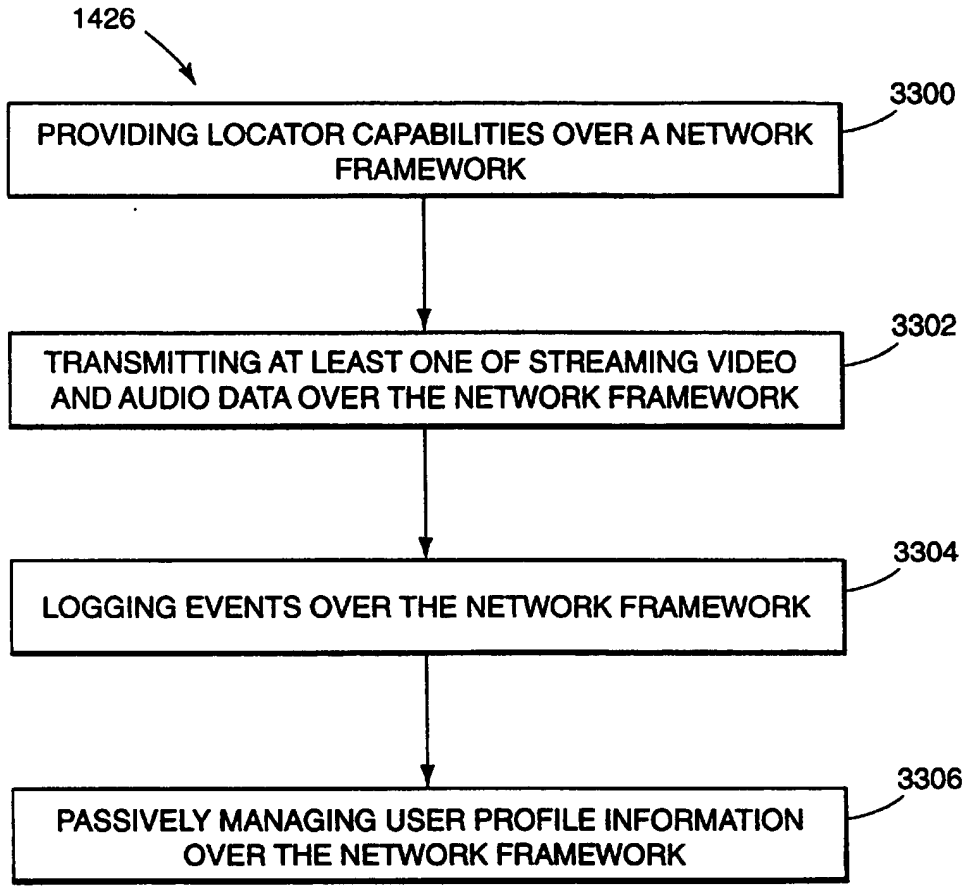
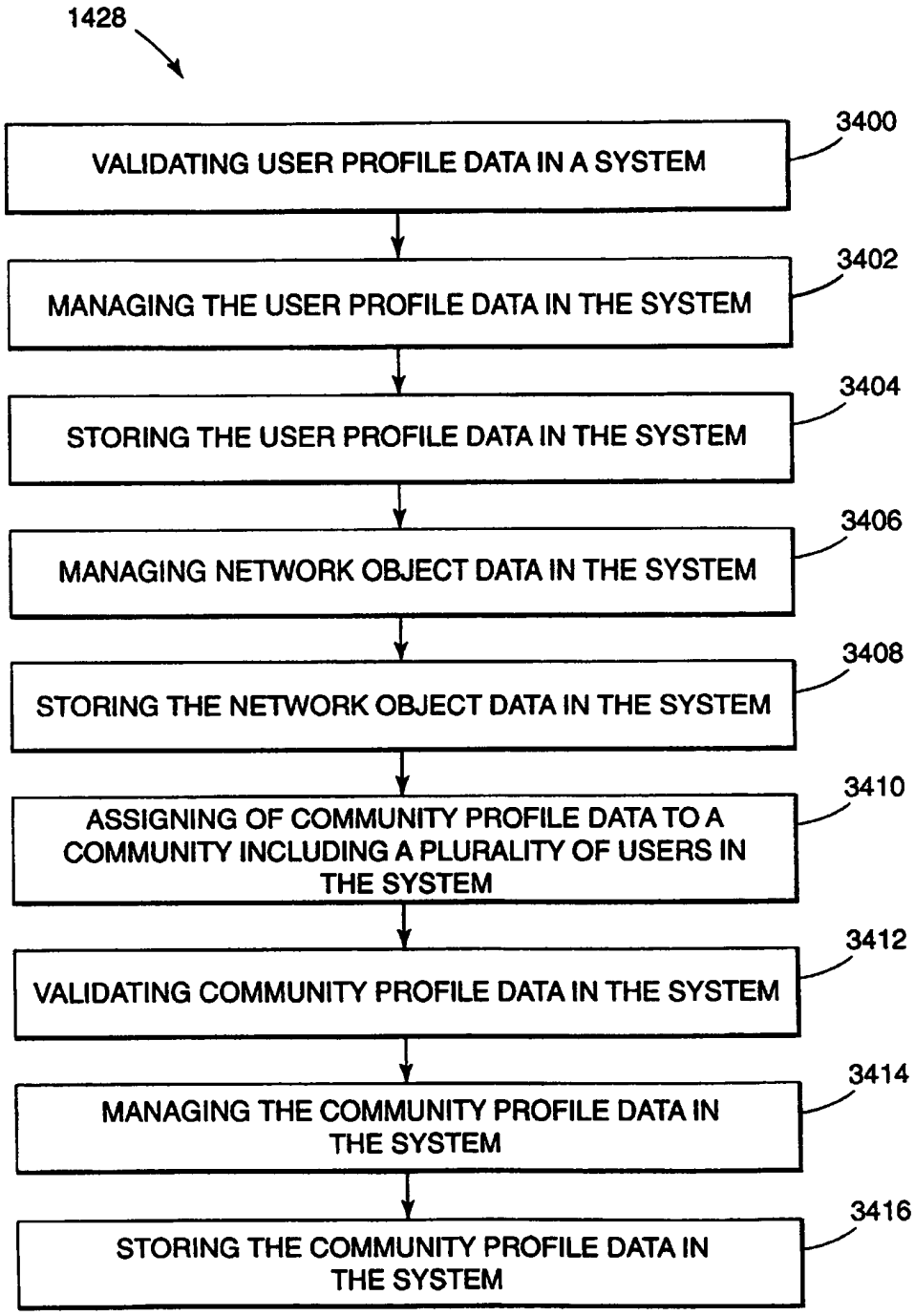

1426
PROVIDING LOCATOR CAPABILITIES OVER A NETWORK FRAMEWORK
3300
TRANSMITTING AT LEAST ONE OF STREAMING VIDEO AND AUDIO DATA OVER THE NETWORK FRAMEWORK
3302
LOGGING EVENTS OVER THE NETWORK FRAMEWORK
3304
PASSIVELY MANAGING USER PROFILE INFORMATION OVER THE NETWORK FRAMEWORK
3306

Fig. 94


1428
VALIDATING USER PROFILE DATA IN A SYSTEM
3400
MANAGING THE USER PROFILE DATA IN THE SYSTEM
3402
STORING THE USER PROFILE DATA IN THE SYSTEM
3404
MANAGING NETWORK OBJECT DATA IN THE SYSTEM
3406
STORING THE NETWORK OBJECT DATA IN THE SYSTEM
3408
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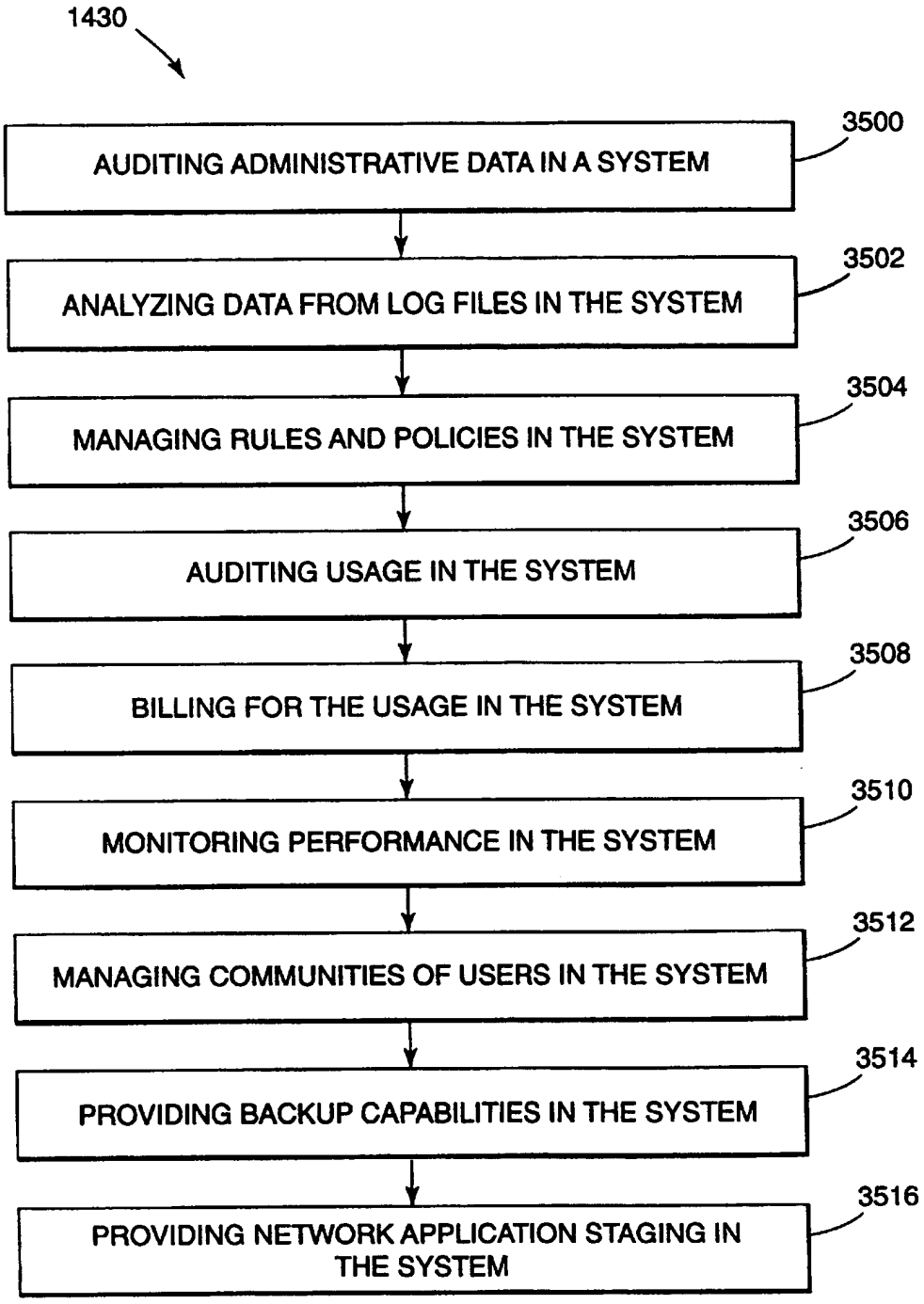
3410
VALIDATING COMMUNITY PROFILE DATA IN THE SYSTEM
3412
MANAGING THE COMMUNITY PROFILE DATA IN THE SYSTEM
3414
STORING THE COMMUNITY PROFILE DATA IN THE SYSTEM
3416

Fig. 95


1430
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3500
ANALYZING DATA FROM LOG FILES IN THE SYSTEM
3502
MANAGING RULES AND POLICIES IN THE SYSTEM
3504
AUDITING USAGE IN THE SYSTEM
3506
BILLING FOR THE USAGE IN THE SYSTEM
3508
MONITORING PERFORMANCE IN THE SYSTEM
3510
MANAGING COMMUNITIES OF USERS IN THE SYSTEM
3512
PROVIDING BACKUP CAPABILITIES IN THE SYSTEM
3514
PROVIDING NETWORK APPLICATION STAGING IN THE SYSTEM
3516

Fig. 96

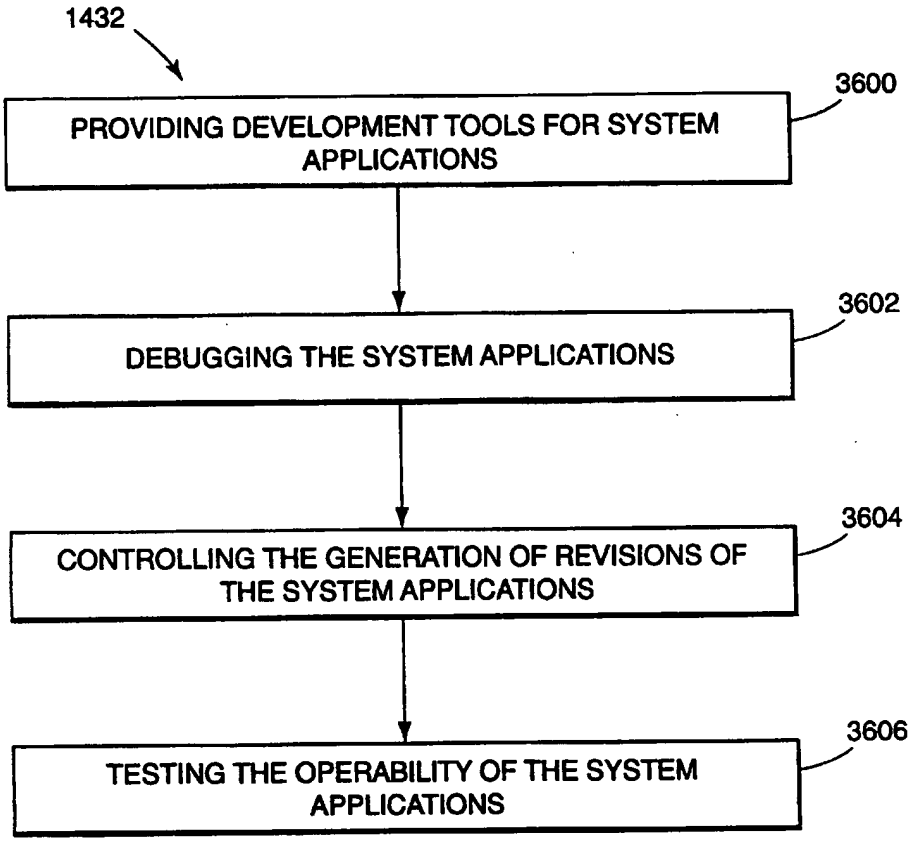
1432
3600
PROVIDING DEVELOPMENT TOOLS FOR SYSTEM APPLICATIONS
3602
DEBUGGING THE SYSTEM APPLICATIONS
3604
CONTROLLING THE GENERATION OF REVISIONS OF THE SYSTEM APPLICATIONS
3606
TESTING THE OPERABILITY OF THE SYSTEM APPLICATIONS

Fig. 97